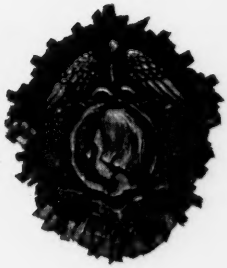
Journal of Dentistry for Children



FOURTH QUARTER 1948

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Initiative in Caries Control

J. R. KOPELY, D.D.S.
Pelham, N. Y.

EDITOR'S NOTE

Jay Kopely is a graduate of Pennsylvania — class of 1930 — and has been associated with Beth David Hospital and the "Academy," a child caring institution in N. Y. He received his certificate in Orthodontics from N. Y. U. in 1943, but since his return to private practice in 1946, after 3 years in the Army, he has done general dentistry, with about 50% of his time devoted to children. We hope to meet him when we come to Syracuse early in 1949 to pick up that S & S he's promised us! *A. E. S.*

Considerable space is allocated in our "Journal of Dentistry for Children" on present and future expansion of government programs for child dental care. It will take large outlays of money and a great deal of time must elapse before the effects of these activities can be shown to have produced the beneficial results expected of them.

In the meantime, the individual dentist has within his reach, technics which can be applied with real hope of stemming the tide of dental decay. The nightmare of the first visit extraction may soon be a thing of the past. The gratitude of parent and child will be unbounded with the applications of real preventive care, eliminating deep cavity preparation with its attendant unpleasantness and pain.

The early prevention of dental caries is rapidly becoming a reality—it has gone far beyond the scope of opening the pits and fissures in the days of prophylactic odontotomy. Two means which the average dentist can and should certainly employ are the impregnation techniques of Gottlieb and the use of a therapeutic dentifrice.

Most children can be taught to use a tooth paste or powder. There is no reason why a therapeutic dentifrice should not be prescribed with the definite plan of reducing the caries expectancy. The rapid development of the ammonia bearing dentifrice has been recognized by the ADA Council on Dental Therapeutics.[1, 2]

It has been established that the rate of dental decay varies directly with the percentage of salivary ammonia. And even very small amounts of ammonia, .005%, will dissolve salivary mucin, thus inhibiting plaque formation.[3] Stephan[4] in a classic experiment, was able to show a remarkable reduction in caries in a group of patients using relatively high concentrations of urea. When this is used for brushing or rinsing for 3 to 4 minutes, the pH of salivary plaques may go as high as 9, which is well over on the alkaline side and the effect will last for many hours.[5] So that the use of the dentifrice in this manner twice a day may protect the dentition for the entire 24 hour day.

It is interesting to note that the classic work of Groves and Stephan are now being put to practical use by Kesel and the University of Illinois in the Chicago tooth brushing experiment.[6] However, they have cut the urea to a point far below that shown by Stephan to be most effective.

Every parent is interested in the welfare of his child and the majority will cooperate if the means and objective are carefully explained. It is up to the dentist to explain—and then to prescribe.

A simple dentifrice available to the public having the benefits of the ammonium ion is the following taken from (3) Henschel's formula:

AMMONIUM ION DENTIFRICE

(Henschel)

Rx	Carbamide U.S.P.	46.0
	Dibasic ammon. Phos.	5.0
	Bentonite	5.0
	Sod. Lauryl Sulfoacetate	3.0
	Calc. Carbon. precip.	40.0
	Saccharin, Soluble	0.3
	Methyl Salicylate	0.7
		100.0

It is important to note that relatively high amounts of carbamide (synthetic urea) are advisable in such a formula, to obtain the maximum effect.[4]

By prescribing a therapeutic toothpowder for home use and by applying the newest concepts of caries prevention in the office the dentist gains in professional stature—stressing the science rather than the art of dentistry. Successful results can be obtained by the dental practitioner — he is the one to whom the parent brings the child for the first visit—his is the golden opportunity to grasp.

Too often the child is given a dental treatment and then forgotten until pain prods the parent into the next dental visit. This situation is unfair to the dentist and the child and the dentist bears part of the responsibility. He should send regular recalls so that the patient gets a periodic checkup before complicated treatment becomes necessary. And at these visits a dental prophylaxis should be followed by a caries preventive treatment to render all surfaces of the primary and newly erupted permanent teeth immune to dental caries.

Gottlieb[7] has presented the profession with a method of caries prevention which is a potent defense against invasion of tooth structure by caries process. Since it requires periodic office visits, the child is kept under continual observation. The youngster accepts these visits as routine, for no painful treatments are encountered, and emergency measures such as extractions are avoided. The patient is rendered a real service.

It is the inability to cope with a possible uncooperative child that causes the attitude of "the baby teeth will fall out—they don't need treatment." The methods suggested will eliminate this apologetic attitude by doing away with the basic reason for its existence.

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The photogenic phellow on the left is Mott Erwin, retiring President. The glabellate guy on the right is your Editor and incoming President. What passed between them was not liquid, but a hand made and inscribed gavel fashioned by Mott and presented to the Society.

National meeting, Chicago, September, 1948.

The Role of the Cements in Pedodontics

JOHN OPPIE MCCALL, D.D.S.*
New York, N. Y.

From the time when dentists made their first tentative steps in operative dentistry for children, — that is, the filling of cavities rather than extraction of carious teeth, even up to the present time when Pedodontics has come to be recognized as a special branch of dentistry, there has been dependence on cements as a filling material for children's teeth.

As with many other procedures in dentistry that are handed down from one generation to the next, there has been too little critical study of this question, — too little attempt to devise and adopt a better method. The reasons for early dependence on cement, especially oxyphosphate cement, are easily understood. Speaking personally, I can analyze them in the light of my own early experience in general practice.

In the first place, there was no understanding in those years of the importance of the primary teeth either during their own period of functional use or in their role of foundation units for the permanent dentition. In the early years of this century dentists had, however, reached the conclusion that a clean, healthy mouth was a definite factor in general health, — also that prevention or alleviation of toothache was as much a duty to the child as to the adult, if not more so. Dentists of that day recognized an obligation to the child but chiefly this took the form of the Mouth Hygiene campaign, with emphasis on the toothbrush and its assumed ability to prevent decay of the teeth. Filling cavities, when they did come to the dentist's attention, was managed by excavating a little decay and putting in a cement filling, — the easiest way.

Another factor inclining dentists toward the use of cement was the lack of knowledge of the internal anatomy of the primary teeth. This was not taught in dental colleges at that time, hence the possibilities for cavity preparation for metallic fillings were quite unknown. Added to which, of course, was the question whether the child could be induced to submit to a really complete excavation and preparation.

Again, there was the question whether the primary tooth structure was of such a quality that it would "hold' a permanent filling. And it is a fact that many fillings in children's teeth intended to be permanent were lost soon after insertion, this being due, as we now know, to faulty cavity preparation and manipulation of the filling material.

The economic and psychologic aspects of the question were of decided importance and influence as well. It was and, I fear, still is the easiest way when confronted with a parent unwilling to pay and a child unwilling to cooperate, to remove decay as well as circumstances seem to permit and "stick in" some cement. There are times when this may be justified as a temporary expedient but the parent should understand that the work is not complete and that a satisfactory filling should be placed when conditions are more favorable.

Experience in both private and clinic practice has shown that, first, primary teeth can be properly prepared for, and will receive, good metallic fillings even when quite badly broken down and, second, that the properly conditioned child will cooperate in the placing of such fillings, in many instances as early as two years of age.

The question may be asked, — why is the cement filling unsatisfactory in the primary tooth? The answer, broadly, is that the reasons are the same as for cement fillings in permanent teeth. I am speaking here of oxyphosphate cements. These cements do not

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wear well on occlusal surfaces and tend to dissolve out at the gingival line on proximal surfaces. Furthermore, I am satisfied, although I cannot prove it, that they do not have the rigidity required for heavy mastication. It appears that children chew their food more vigorously when their teeth are restored with metallic fillings.

A real disservice was done, I believe, and unwittingly to be sure, when red copper cement was introduced to the profession. Its antiseptic powers, not always too much in evidence, encourage the dentist to leave partially decayed dentin in the base of some cavities. In such cases there will be a slow extension of the carious process. The reason seems to be lack of penetration of the copper salts into the carious dentin. Parenthetically, I might state that it is always a questionable procedure to leave dentin which is not hard, although possibly somewhat discolored, in the base of a cavity even if a penetrating germicide such as ammoniacal silver nitrate is applied.

Returning to copper cement, — it has been clearly demonstrated by microscopic examination of teeth with cavities in which different cements have been placed, that copper cement is decidedly irritating to the pulp. This means that it should not be used as a base for metallic fillings, to say nothing of its current quite common use as a complete filling in cases of deep caries.

Metal fillings should always have cement bases, the usual oxyphosphate cements serving acceptably for this purpose. In extremely deep cavities it will be wise to place a little zinc oxide-eugenol cement first. This has been shown to be best tolerated by the pulp. However, this should be covered by oxyphosphate cement as the greater hardness of the latter cement makes it the best material for a foundation for amalgam.

In the child's teeth, particularly, both primary and permanent, a cement base should be placed under all amalgam fillings, even when the cavities are quite shallow. (For inlays, the cement used for setting will answer the same purpose.) Experience has shown that these young teeth are very sensitive to the thermal shocks transmitted by uninsulated silver amalgam.

In late years the silico-phosphate cements have come into use. These seem to have a place of usefulness in Pedodontics but need careful study to determine their place and possible limitations. With these cements, however, there is likely to be the same tendency to careless handling that marked the earlier use of the oxyphosphates. Leaking margins are not unknown. Whether this is due to faulty technic or is an inherent weakness of the material is yet to be determined. For those silico-phosphate cements which are supposed to have antiseptic powers a word of caution is in order. Again it is a question of the penetration of the antiseptic ingredient.

In conclusion. — Cements are invaluable in Pedodontics but must be used properly and without dependence on assumed mystic powers.

Character is not made in a crisis—it is only exhibited—*Dr. Robert Freeman*

Tumors of the Hard Tissues of the Oral Cavity With Special Reference to Children

HAROLD A. MAXMEN, B.S., D.D.S.
Detroit, Michigan

EDITOR'S NOTE

Harold Maxmen is one of those rare individuals whom everyone seems to like! Perhaps that's because he's always ready to take on an extra job and do it well, or perhaps because he always has a pleasant smile. A graduate of the University of Detroit in 1936, Harold shortly thereafter associated himself with the Detroit Board of Health, where he did an endless amount of root surgery, replantations and anterior restorations. He entered the private practice of endodontics in 1943, is Vice-President of our Michigan Unit, a popular clinician and writer, husband of pretty Ethel, and father of Jerry Samuel. We hope you enjoy his well written article on a subject seldom presented in pedodontic circles, but which certainly needs discussion.

A. E. S.

In this paper, the writer plans to dwell on the clinical and roentgenologic characteristics of some of the more common varieties of tumors found in children and young adults. Many such tumors have come under the writer's personal observation during the time he was associated with the Children's Fund of Michigan, the Detroit Department of Health, and in private practice. The incidence of such tumors as adamantinoma, central giant cell tumors, odontomas and cysts among children is much higher than is generally believed. Early discovery and treatment often will prevent disfigurement of the face.

Nearly all types of tumors that arise in any of the bones of the body may be found in the jaws. However, there are certain tumors and cysts which are peculiar to this region. All new growths should be considered as potentially malignant and treated accordingly.

No paper on tumors would be complete without a description of the differences between benign and malignant tumors. Mead[1] tabulates them as follows:

Benign Tumors

1. Are homologous and typical in cellular structure.
2. Are rich in fibers and poor in cells.
3. Usually have a capsule.
4. Are very poor in blood vessels, except angioma.
5. Are usually hard, fibrous and dry, except
11. May kill mechanically by weight, pressure, or hemorrhage.
12. Prone to calcareous infiltration, and fatty degeneration.

Malignant Tumors

1. Are heterologous and typical in cellular structure.
2. Are poor in fibers and rich in cells. Cells are small.
3. Are not encapsulated.
4. Are rich in blood vessels, except scirrhus carcinoma.
5. Are soft and cellular.
6. Often ulcerate in tumor itself.
7. Seldom grow large, except sarcoma arising from bone. Grow principally inward.
8. Never primarily multiple, except melonoblastoma.
9. Do recur after removal.
10. May metastasize.
11. Kill by infiltration and destruction of surrounding tissues.
12. Prone to colloid and capillary changes.

The best-known theories regarding the origin of tumors are:

1. Heredity—work of Maude Slye in causing cancer in mice.
2. Embryonal Theory (Cohnheim) — displaced embryonal cells lying quiescent un-

ıil irritated—ex. Dermoids.

3. Irritation Theory (Virchow)—ex. epithelioma in pipe smokers.
4. Predisposing Causes (age) Tumors occurring early in life are more often found to be of the connective-tissue type.

I. Benign Tumors

A. Odontomas

These growths are peculiar to the jaw bones. An odontoma is a tumor derived from the cells concerned in tooth development. Formerly, the term odontoma was applied to calcified masses alone. It was shown by Broca[2] that this conception is too narrow a view, and that uncalcified dental tissues can exist as tumors. At the present time, cysts arising from the cells concerned in tooth development are also included as odontomas by many authorities.

The classification of odontomas in this review is from a "Report on Odontomas" by a committee of the British Dental Association and described by Blair and Ivy.[3]

1. Epithelial odontomas, in which the abnormal development occurs in the dental epithelium alone. These are for the most part cystic, and are divided into four varieties:
   (a) Adamantinoma
   (b) Dentigerous cyst or follicular cyst
   (c) Dental root cyst
   (d) Median maxillary cyst
2. Composite odontomas are calcified tumors, in which the abnormal development takes place both in the dental papilla, and sometimes in the dental follicle:
   (a) Complex composite odontoma
   (b) Compound composite odontoma
3. Connective tissue odontomas composed of connective tissues tooth elements alone are:
   (a) Cementoma
   (b) Fibrous odontoma

Discussion of the above odontomas:

(a) Adamantinoma (multilocular cyst)

Thoma[4] states that the adamantinoma generally is found during the age of tooth formation. This tumor is more common in the mandible than in the maxilla. Its slow growth may prevent the patient from seeking treatment. According to Blair and Ivy[5] this is the least common of the three forms of epithelial odontomas. The patient complains of a swelling usually in the molar region of the mandible, which has been very slowly increasing in size. There may be a loose tooth. There is no pain. The alveolar border of the jaw is found to be enlarged, the outer alveolar plate being more affected than the inner one. There may or may not be a history of lack of eruption of a tooth.

The adamantinoma arises from the dental epithelium, usually with the formation of numerous solid or cystic cavities (multilocular cyst), containing viscid brownish fluid. The cystic cavities vary much in size, and present a smooth lining with papillary projections which may partly or completely fill the cavity.

The septum between the cysts possess a lining flattened or spheroidal cells, and columns of epithelial cells may be found in the fibrous stroma. Metastasis is very rare. The tentative diagnosis differentiating this tumor from other expanding growths of the jaw, such as sarcoma, benign giant cell tumor and other varieties of cysts, can usually be made with the roentgenogram, which shows the growth divided by fine bony trabeculae into numerous compartments. However, a microscopic pathological examination is essential for confirmation of the diagnosis. Treatment consists of complete removal of the growth by enucleation from the surrounding bone. It is important that all of the epithelium be removed, or it will recur.

(b) Dentigerous Cysts

Dentigerous cysts or follicular cysts (tooth bearing) are benign tumors. They are due to the proliferation and degeneration of cells of the enamel organ before eruption of a tooth, which lies partially or completely developed within the cyst cavity according to Mead.[6] Due to the relation to developing teeth, these cysts are more numerous during adolescent or earlier years, but are much more rare than the root type of cyst. Any tooth may be involved. The upper cuspids are the most common ones, followed by the mandibular 3rd molars. A cyst of the same character may also contain a supernumerary tooth. The crown of the tooth is usually exposed in the cyst cavity, and the root embedded in the neighboring bone, the

capsule being attached to the neck of the tooth. Symptoms and diagnosis: There is a gradually increasing painless swelling of the jaw bone, usually involving the outer plate. Later, the bone is thinned, giving the characteristic "parchment or celluloid" feeling. The absence of a tooth in the regular alignment is a point of significance. Suppuration may occur. The radiogram shows an absence of bone with well defined margins, containing the unerupted tooth. Treatment consists of complete removal of the cyst with its capsule. Extraction of the tooth may be necessary if it is malformed or in such a position that it cannot be brought back into correct alignment.

(c) Root Cysts

The root cyst is by far the most common tumor occuring in the jaw. The dental root cyst nearly always occurs as a sequel to chronic inflammation about the apex of a tooth as a result of infection following death of the pulp. Some men, as stated by Ivy[7] reported similar cysts of purely traumatic origin in which the teeth are vital. However, Gullifer[8] in 1938, describes a bone cyst found in patients 5 to 20 years of age resulting from trauma and bearing no relationship to the teeth. He states that this lesion should not be confused with the radicular cyst which is concerned etiologically with the epithelial rests. The bony cyst, described by Gullifer, is a connective tissue lesion.

Among the connective tissue elements of the granuloma about the apex of a pulpless tooth are frequently found masses of epithelial cells—the paradontal epithelial cell rests of Malassez. Proliferation of epithelial cells found within the granulation tissue is stimulated by the inflammatory process. The mass of epithelium then breaks down in the center and liquefaction occurs. The material in the cyst may be buttery, containing cholesterin crystals, or a clear straw colored fluid. Secondary infection may convert the contents into pus. Dental root cysts vary greatly in size, from that of a small pea to that of a hen's egg. In the upper jaw, they may encroach on the maxillary sinus or the nasal fossa, but rarely break into these cavities. A root cyst may extend and gradually involve the roots of adjacent sound teeth, causing secondary pulp devitalization. Symptoms and diagnosis: Presence of devital teeth, or history of a tooth having been extracted some time previously.

There is usually a history of swelling without pain. Roentgenogram shows a clearly defined area involving the apices of one or more teeth. The margins of the area are very regular and sharply defined in contrast to the usually hazy outlines of granulomas. When a cyst is punctured, it usually releases a clear serous fluid. Infection causes suppuration. The maxillary lateral incisor is the most frequent seat for root cyst development. Cystic tumors which do not contain fluid must be carefully differentiated from sarcomatous or other solid tumors. These often cause a bulging of the bone and a radiographic appearance closely resembling that of cysts. Treatment: The practice of making an incision into the swelling to provide drainage is to be condemned. If the tooth responsible is still present, it will have to be treated successfully and the root resected or extracted. The cyst itself may be treated in one of several ways.

1. Complete extirpation and closure (as described by Ivy[9]).
2. Partsch method.
3. Harrison's method[10] is complete extirpation and obliteration of cavity by flaps.

(d) Median Maxillary Cysts

Location: In the median line in the anterior portion of the incisive canal. Clinically: These appear as smooth, round sacs, filled with a clear, sterile fluid, and have a thin epithelial lining. Their size varies from a small pea to that of a cherry or larger. Diagnosis is made with the radiograph, since maxillary cysts rarely cause any definite symptoms. Their discovery is usually during routine radiographic examinations of the central incisor region. Seldom do median cysts reach such a size that they cause a bulging of the soft tissues in the median line behind the central incisors. From the viewpoint of diagnosis, the dentist should be familiar with the existence of such cysts because this knowledge may eventually prevent embarrassing diagnostic errors. In a radiograph of the anterior part of the maxilla, the shadow of the median cyst can easily overlap the root end of a central incisor and look

like a root cyst at the apex of the incisor, although in reality the cystic formation has no connection whatsoever with the teeth.

Etiology: Kronfield[11] states that it is due to the improper union of the parts forming the palate enclosing epithelial remnants which may degenerate and cause cystic formation. However, Meyer[12] contradicts the above statement and claims that the growth must originate from the epithelial contents of the incisive canal.

2. Composite Odontoma

The composite odontoma is a calcified tumor, in which abnormal development takes place both in the dental epithelium and the dental papilla. Two common varieties are discussed by Bunting.[13]

(a) Complex Composite Odontoma. Here the calcified tissues are irregularly intermingled and have no definite shape. We have a disordered conglomeration of enamel, dentin and cementum, which may be unerupted or erupted. These tumors may be discovered at any age, and frequently are not recognized until infection follows, such as osteomyelitis. These hard masses are often mistaken for necrotic bone and are found most often in the molar region of the lower jaw. The roentgen ray reveals a mass of dental tissue producing denser registration than that of bone.

Treatment: Complete surgical removal.

(b) Compound Composite Odontoma. This is a rarer type of dental tissue tumor. It consists of a varying number of definitely formed teeth that are closely grouped together. The growth is usually unerupted and assumes the place of a normal tooth.

Treatment: Complete surgical removal.

3. Connective Tissue Odontoma

(a) Cementoma

A cementoma is a connective tissue odontoma derived from the dental follicle. These tumors are irregular in contour and on section the tissue is non-laminated and very vascular. There is resorption of the surrounding bone due to pressure. A section of the tumor will often show immature tooth structure in its central portion. Overactivity of the dental follicle in the production of cementum surrounding the immature tooth, thus destroying it, is the etiologic factor.

Fig. 1—Compound Composite Odontoma in boy age 14.

B. Giant Cell Epulis, and

C. Central Giant Cell Tumor

Since the tumor tissues of the above two are practically the same, they will be treated under the same heading to save repetition. Giant cell tumors usually occur on the gum in form of an epulis. They may also involve the interior of the bone, usually the mandible, causing expansion of the external plate. In the presence of a slowly enlarging, painless swelling of the alveolar portion of the bone, the possibility of a benign giant cell tumor should be considered. If the cortical plate of bone becomes perforated by the tumor, the mass will have the typical purplish color seen in the giant cell epulis. The majority of cases are seen in early life, 5 to 25 years. There is no special sex predilection. Apparently, it is related in general to cartilaginous ossification, especially in the long bones, and occurs where bone is formed by precartilaginous ossification. Likewise in the jaws, these tumors are formed in areas near cartilaginous remnants, as in the symphysis, the posterior part of the body of the mandible, the neck of the condyle, and in the region of the inferior turbinate in the upper jaw. These tumors may be the result of trauma, inflammatory process or misplaced embryonic cells. The symptom of pain progresses as the lesion tends to grow. There is a tendency to go through the cortex and to recur.

The radiographic appearance may closely resemble that of a cyst, but the margins are less well defined and bone may not be completely absent. It may show a trabeculated area of bone resorption which has a shell-like margin.

Microscopically, it consists of a stroma of fibrocellular tissue. Scattered throughout are giant cells, small masses of bone and cartilage, and numerous areas of hemorrhage. There has been considerable confusion as to the proper classification of this growth. One term commonly used is giant-cell sarcoma, but the word implies malignancy and these growths are not malignant. Metastasis from benign giant cell tumors of the jaws is unknown. The giant cell in this form of tumor differs from that found in true giant cell sarcoma of the malignant type. The unfortunate application of the term sarcoma to the ordinary giant cell tumor of the jaws has led to much unnecessary sacrifice of tissue, deformity and functional disability through the performance of extensive and mutilating operations, such as complete section of the lower jaw.

Treatment: Consists in carefully dissecting the tumor mass from its bony bed, without encroaching extensively on surrounding healthy bone.

D. Benign Connective Tissue Tumors

These connective tissue tumors of the jaws have tendencies to calcification and range in degrees from malignant to the most benign osteoma. Benignity here as elsewhere is dependent on the ability of the cells to form adult tissues. The more cellular growths occur in younger individuals. These ossifying jaw tumors may be divided into three groups as follows:

1. Ossifying Fibromas

Ossifying fibromas, according to Bunting[14] and others, are hard, fibrous, painless, slow growing tumors occuring generally in the antrum or on the body of the mandible in persons under thirty years of age. Blair and Ivy[15] say that this condition occasionally starts within the substance of the mandible, causing a localized expansion. Preoperative differentiation from slowly growing sarcoma is often difficult. The roentgen ray shows a well-defined oval area of incomplete bone decalification,

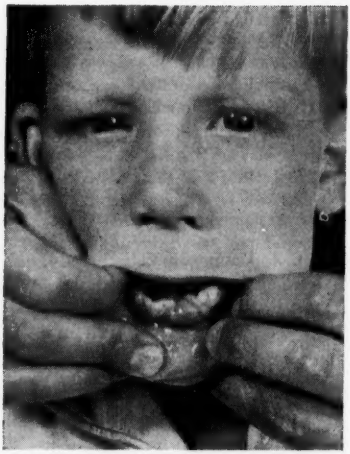

Fig. 2—Epulis in boy age 12.

easily distinguishable from the registration of a cyst where the well outlined area shows absence of bone. Treatment is exposure of the growth by removal of the cortical bone, and shelling out the tumor. Recurrences are common but metastasis is absent.

2. Osteoma

Osteomas are benign bony tumors. They are more commonly found in connection with the maxilla than the mandible. They form dense, painless circumscribed enlargements having pedicled button-like attachments to the normal bone, slow in growth, pushing out from the surface of the bone. A classical example is the torus palatinus as found in the palate. Their dense character clinically and radiographically will distinguish them from sarcomas and cysts. Osteomas are more common among adults over forty. Treatment: removal by incision. The prognosis is good.

3. Chondroma

Chondromas are most commonly found in children in precartilage areas. These tumors should be excised early. When incompletely removed, the recurrent pure chondroma tumor tends to be more active, and may assume the characteristics of malignant osteogenic sarcoma.

II. Malignant Tumors of the Jaws

A. Osteosarcoma

Osteosarcomas, according to Mead[16] are "the malignant tumor of early adult life." They occur in strong adults, and cause changes in the contour of the face. The skin is stretched, but not invaded as in carcinoma. Dilated veins are visible, and the temperature of the skin is raised. These tumors expand the bone and break through the cortex, forming a subperiosteal tumor mass. Bunting[17] states that "the extreme variations of cell types and mesoblastic tissues of the ground substances (even in the same osteogenic sarcoma) have resulted in a great variety of names being given to this tumor, with subsequent confusion of terminology." These bone tumors of the jaw are comparatively rare, one in a million. The differential diagnosis is chiefly to be made from cysts and from benign giant cell tumors. The osteogenic sarcoma usually grows more rapidly than the growths previously mentioned. The roentgen ray shows incomplete bone destruction, with irregular margins and a "sun-ray" effect on the periphery. In benign giant cell tumor, the roentgen ray shows more complete bone destruction, with completely well-defined margins. A cyst shows a well-defined radiolucent area. Needle puncture will obtain fluid in the case of a cyst. A biopsy shows several types of osseous tissues and spindle shaped mitotic figures indicate malignancy. The clinical appearance starts with a small, soft, raised corrugated nodule resembling granulation tissue, which may appear in any situation along the margins of the jaws or the buccal sulcus. It appears as a mass of new tissue instead of an ulcer, although the surface becomes ulcerated in the later stages. The surface of such a growth may become raw, red, nodular, and secondarily ulcerated, with a soft, easily bleeding surface. It has a great tendency to spread invading bone and gum tissue and is accompanied by a spreading and loosening of the teeth involved. Sarcomas seldom cause pain, especially in the earlier stages, but they may occasionally do so by pressure on nerve trunks. In all cases, the final diagnosis should rest on the microscopic examination, to which it is a safe plan to subject every tumor.

Etiology: is unknown but trauma and irritation are mentioned.

Treatment: consists of excision en masse with surrounding tissue and radium therapy.

Prognosis: All cases of sarcoma are bad, even if removed early, but recurrence may not take place for a long time. However, metastasis from jaw sarcoma is rarer than from other sarcomata according to Blair and Ivy.[18]

B. Carcinoma

Carcinoma of the jaw is a secondary invasion from neighboring epithelial tissues, such as the gum or mucous membrane of the maxillary sinus according to Moorhead and Dewey.[19] Because it is a disease of old age, fifty to sixty, and not found in children, very little will be said here about it. Some of the symptoms may be hemorrhage, loose teeth, neuralgia and bulging of the eyeball on side affected. Carcinoma invading the bone gives a very irregular ragged appearance in the roentgen ray film. However, in the x-ray examination of the sinus, it may not appear clearly as a break in the wall suggestive of tumor involvement. Carcinoma of the maxillary sinus is the most treacherous type of cancer in the upper jaw. The symptoms may be entirely those of subacute and chronic maxillary sinus infection. Determination is by biopsy. The suppurative infiltrating form of carcinoma is also treacherous. Regional lymph nodes may become affected and the x-ray shows necroses of the bone simulating osteomyelitis. This latter type metastasizes to other areas such as the submaxillary and deep lymph nodes, whereas the antrum type goes to the pharyngeal and carotid lymph nodes.

Biopsy—shows squamous cell and at times adeno-cystic basal cell lesions.

Treatment—as in other malignancies, radical surgery combined with radiation gives best results.

Conclusions

1. Tumors of the mouth of children are frequent and may be located at any position in the oral cavity.
2. The diagnosis must differentiate between the inflammatory tumors and the true neoplasms.
3. The early recognition of premalignant and

early malignant lesions occuring in the mouth is most important.

4. Many of these tumors may be found during the course of examination by the dentist, while they are still symptomless, and even before they have attracted the attention of the patient.

5. The alert dentist will correct irritating appliances or jagged edges of teeth. Teeth with pulp involvements should be successfully treated or extracted, and residual infections eliminated.

6. The use of caustic drugs is condemned and should never be resorted to in removing new growths.

7. All new growths should be considered as malignant unless otherwise proven.

8. When a suspicious looking lesion presents itself, the patient should be informed of it, and referred to a capable oral surgeon.

2305 David Broderick Tower

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Retiring President Mott Erwin presents to Elsie Gerlach a plaque in recognition of her faithful services as Treasurer during the period 1940-47. National meeting, Chicago, September, 1948.

CHARTER

American Society of Dentistry for Children

This is to Certify, that in Compliance with the Constitution and By-Laws the

Alabama State Unit

is Recognized as a Component Unit of the Society.

In Testimony Whereof they shall be Designated as the

Alabama Society of Dentistry for Children

This Charter shall be Authority for the purpose of said Society in acting as such.

Signed this Tenth day of August
in the year One Thousand Nine Hundred and 1948

R. M. Enum Jr. D.M.D.
PRESIDENT

Earl L. Lampshire
SECRETARY

Reproduced above is the charter of our latest Unit, Alabama. Activated in the latter part of 1948, this Unit is already in good stride and promises to offer an incentive to some of our numerically larger groups.

Congratulations and good luck to you Alabamians!

A EUROPEAN VACATION

WALTER C. MCBRIDE, D.D.S.
Detroit, Michigan

EDITOR'S NOTE

We think you'll be interested in the following travelog of Walter McBride's European vacation, which we asked him to prepare for us. Even though some parts have been deleted for brevity's sake, it is an entertaining description of a tour we'd like to take some day, too. Walter's many friends will raise a skeptical eyebrow as he speaks about tipping —and going to church—but you never can tell about a fellow when he's away from home!

A. E. S.

Finally came the day. We had waited most a year for this occasion, which was too long, for like an overtrained athlete, we had spent much of our enthusiasm in the preparation. But, true to form, once on the train and away it returned a hundred fold.

New York was sweltering in a 90 degree heat the morning we arrived. Duty coming first we proceeded to the Irish Consulate to secure our last visa, the others having been procured beforehand. In the heat, window shopping lost its glamour, so we went to Music Hall, sitting through the vaudeville twice, and having more time to spend, sought another cool theatre where we saw "Easter Parade." We dined at Schraft's on 5th Avenue and were off to the ship at nine P.M. The baggage and Customs took only a little time, and then because 'twas so warm, we immediately took off our girdles and proceeded to bed. Wished to see the departure of the ship, but the hour was unscheduled.

The Queen Elizabeth is huge. It has two swimming pools, three gymnasiums, two theatres, three libraries, three playrooms, at least a dozen lounge rooms, two full orchestras, twelve bars, numerous studies and writing rooms, six elevators, shops for clothing, accessories, toiletries and souvenirs, three barber and beauty shops and three banks. Besides there are special decks for sports. It carries two thousand passengers and serves ten thousand meals per day, the food for each round trip being purchased in New York. The shops sell only British goods at prices listed in their currency.

Most unusual was the absence of locks for the stateroom doors. You may lock yourself in at night but for the remainder of the time the rooms are unlocked. Honest people, these English! We observed that all dining and lounge room chairs and tables had cords attached which could be fixed to receptacles in the floor during stormy weather. British broadcasts, heralded by the stroke of Big Ben in London, came in daily at nine, after which there were horse races or keno nightly, followed by dancing from ten-thirty to midnight.

Between the first sitting dining schedule at eight, twelve and six, broth in the morning, tea in the afternoon, the theatre at two, some deck chair lounging and reading and a little exercising, games and dancing in the evening, life was very busy aboard. Mrs. McBride missed a few breakfasts in the interest of her figure, while I missed a few because my digestive apparatus couldn't stand the volume. The food was excellent and our waiter not only gave us what we asked for, but a lot more besides.

The last day out we followed the disembarkation orders, by getting our landing cards and passports in order—in packing and labelling our baggage so that it might be removed upon landing. Each piece of luggage must bear a sticker bearing the initial letter of the surname. It is removed in groups of 30-50 pieces in rope cribs, borne by large loading cranes and placed alphabetically in a long examining shed. Each person upon disembarking goes to his letter, selects his luggage from

the hundreds of pieces and proceeds to Customs.

We docked on schedule. The 1st class passengers, with their baggage, disembarked at 2:30, the cabin class at 3:30, and tourist at 4:30, each group being processed separately. In turn each group had a separate so-called boat train taking them to London. The boat trains, like all European transportation systems with the exception of a few combination pullman diners, are boarded from the side, each compartment holding 6 or 8 persons. First class has plush seats — third class, no plush seats. Enroute to London, a two-hour trip, we had tea served on the American Express Company, the officials having met us in the ship lounge rooms immediately after docking. We remarked to our monocled and gracious English guide, about the rolling countryside, through which we were riding and were immediately reminded, that to be real British, one must say "pleasantly undulating!!"

London, to most Americans, is England. Our first impression of London seemed to be one of a huge, sprawling, overcrowded city, with every inch of business property utilized; with mile after mile of similar gray stone shops of every description. There is no segregation of shops or commodites. Because of the peculiar clay subsoil, there are no high buildings, most of them being uniformly 5 and 6 stories. Their green squares are numerous and their many parks large, which is a particular advantage because there is a definite shortage of front and back yards as play grounds.

The automobiles are generally small, most of them four seaters, about the size of the American Austin and all right hand drives, as are the buses. In England one must look to the right, then to the left, as he crosses the street, which is directly contrary to what we are taught. In our misconsiderations there were a few times when we almost lost a patch of our clothing not to mention our anatomy! After seeing their midget cars for a time, a Chevrolet sedan takes on the aspect of a limousine. The flat cars and railway cars are similarly small. Train and plane schedules are quoted in hours of 1 to 24, instead of our 1 to 12, with A.M. and P.M. appended. Train and subway tickets are picked up at the end of the journey, instead of at the beginning. In street directions, stop lights are called turnings, as for instance, left at the second turning, instead of at the second stop light. Parking lots are car parks; a ticket office is a booking office; drug stores are chemist shops and the cab drivers, thousands of which there are, have the greatest assortment of jalopies one could imagine.

Hotel dining rooms have a difficult problem with the current rationing, the Ministry of Food having reduced each dinner to 3 courses, lunches to 2. For dinner one may have soup, fish and entree, or soup, entree and sweet. The price is also pegged at 5 shillings ($1.00) and to ease the situation a house charge, together with a service charge of 12½ per cent is added, as well as an additional fee for coffee or tea.

The tours of London were an education in themselves. We learned first of all that London proper is approximately only one mile square, the metropolitan area being composed of additional boroughs. This explains the confusion we have always had concerning St. Paul's Cathedral and Westminster Abbey. The former is the parish church of London proper, the old city, while Westminster Abbey is the parish church of the borough of Wesminster, a much larger borough, and this church became more famous because the king's residence is in the borough of Westminster. Both are of the Church of England, which Henry the Eighth established when he fell out with the Pope over his refusal to grant him a divorce from his first wife. It is quite like our Episcopalian service.

On our tours we saw both of these historic churches. The former is much more adaptable for services, but the latter is more interesting because it holds the remains of so many of the former kings and queens. All have been buried here up until about 300 years ago. Continuing, we crossed over London bridge which in song has been falling down for centuries; saw the Tower of London, where Rudolph Hess was interned during the war and where so many indulgent or indifferent kings and queens met their fate and wherein now rests the crown jewels. The jewels were exquisite, diamonds

sufficiently large to choke an ox. We saw Buckingham palace, the Roosevelt monument, recently dedicated, the American Embassy and and bombed areas. The Londoner speaks not of bombing but blitzing and speaks lightly of the damage done. Around St. Paul's Cathedral, whole blocks are still laying waste, with portions of some walls standing like sentinels. As a protection to the pedestrian, brick walls have now been built around the exposed basement areas. A few buildings were destroyed adjacent to our embassy. The Germans used a lot of incendiary bombs, which, having fallen through the roof, burned out the interior of the building, leaving perhaps only a portion of the wall standing. All over London one may see evidence of this even today. Repairs and restorations, because of materials and wherewithal, have been almost nil.

On our day tour to the Shakespeare country, some 120 miles diagonally across England, we went through some interesting English countryside with quaint cottages and through unusual villages, with narrow, curved streets. In Stratford-on-Avon, we visited Shakespeare's birthplace, saw his tomb and the modern playhouse recently built as a memorial, as well as the thatch-roofed cottage where his famed Ann Hathaway lived.

We saw Warwick Castle on this tour, the home of Warwick heirs for over 400 years, and had lunch in the quaint village of Warwick. Returning, we stopped for a time in historic Oxford learning there are some twenty-three colleges in this city, the most famous of which is Magdalene, where heirs to the British throne have usually matriculated. Enroute through Banbury, we saw the Banbury Cross and recalled the poem my grandfather brought with him from his native land. You perhaps remember:

"Ride a cock horse to Banbury Cross
To see a young lady ride a white horse
With rings on her fingers and bells on her toes
She shall have music wherever she goes."

The story of the cross is one concerning King Edward III, who was vacationing with his Queen in Scotland when she suddenly died. Aboard a coach and a caravan, he and his party and body started on the long trip to London which took 13 days.

Later, as a memorial to his Queen, he ordered a cross to be erected in each of the villages wherein they had stopped overnight enroute. One was in Banbury.

On Sunday we went to the morning service at Westminister Abbey, arriving in the foyer just as the dean of the Abbey and Queen Mother Mary, along with other church dignitaries, came out of the church office to proceed to their respective pews and pulpits. The Queen Mother had on her proverbial high hat, a lavender suit, carried her combination umbrella and cane and wore lavender shoes with Louis XV heels. She looked aged but firm.

One morning we went out to Greenwich park to see where the World's time is made. In an international conference, some 50 years ago 'twas agreed that all time should originate from Greenwich, which is on the prime meridian or zero longitude. We found the place partly dismantled, part of which had already been removed to Hurstmonceaux Castle in Sussex England, where the city light of London would not interfere with the astronomical observations. We saw, however, the big clock, divided and re-divided into hours, minutes and seconds and the big ball which used to drop at 12 noon each day, thus giving the time to the world but which has become obsolete with the inception of radio.

Holland is a little country, about ¼ the size of Michigan and the most thickly populated in Europe. The lowlands near the coast and the Zuider Zee are interspersed with high roads and with pumping facilities to remove the drainage into the canals. The little farms have no fences, using small, water-filled ditches instead. It seemed peculiar to note the absence of fences yet see gates opening from each moat-encircled field to let the stock in and out over small bridges. Black Holstein cattle predominated. Along the highways were piles of peat being dried for winter fuel. Greenhouses, rows and rows of them, were in evidence in which they raised tomatoes and grapes for export. The country youngsters wore the familiar wooden shoes as did most of the farmers, parking them neatly at the door of their houses and walking in in their stocking

feet. For damp soil, the information reads, wooden shoes are much more serviceable than leather.

Our bus tour, from the point of entry at the hook of Holland, took us through Rotterdam, Delft, The Hague, and Haarlem to Amsterdam. We did not see much of Delft, home of the famous china, but stopped for a time in The Hague to see the queen's palace, the peace palace given by the Dutch Government as a home for the peace commission after World War I, and had a glance at the preparations being made for Queen Wilhelmina's 50 year jubilee and Juliana's coronation early in September. In Rotterdam we drove about the central area of the city which was laid waste in a single night by the Germans, at the beginning of the war because the Hollanders refused an ultimatum of being taken over the day before. The territory, perhaps a mile square, is still like an open field with streets running through, but there is now evidence of a rebuilding program going on. We saw too, the area destroyed by the Americans and the English air forces in another part of the city, when they endeavored to destroy the shipping facilities which Hitler acquired when he moved in.

We were informed in Holland of the reclamation of the land in the Zuider Zee, which they have accomplished by building huge circular dykes out from the land and then pumping the water into the sea. Already 500,000 acres have been reclaimed, with three major projects of greater magnitude planned for the next 25 years. With its huge population and cramped quarters, Holland can well use the soil and territory.

Amsterdam we will always remember for its bicycles. Thousands of them jammed the streets during the morning and evening rush hours. We will remember it too for its very delicious and unusual sugar-covered little pancakes, like crepe suzettes, which we had one afternoon. The name we can't remember.

Belgium is only slightly larger than Holland and a neighbor, yet it took a goodly portion of the day to get to Brussels and to the Palace Hotel where we were lodged. Customs takes a great deal of time. The country is rolling and becomes higher as one gets away from the seashore and the lowlands of Holland.

Brussels being the lace center, we visited a lace manufacturing place where the ladies were all agog over the finery and where many newly acquired Belgium francs changed hands. Here, I visited the Eastman Dental Clinic.

We had always looked upon Switzerland as a very astute little country, politically, for having remained aloof during the two World Wars. A native admonished us, however, that their country was the first on Hitler's agenda after Austria, but for some unknown reason he changed his mind and went on to Norway before he got back to their subordination and annexation he met his Waterloo in Berlin.

The mountainous ring which makes up its borders and the chains crossing it leaves little area for farming, yet the thrifty Swiss avails himself of every inch as far up the hillside as he can go without tumbling down. It was haying time when we were there, a harvest in which every individual seemed to take part. A few had wagons and racks for hauling, a few carts, yet the majority on the hillsides were bringing it down tied in bundles thrown over their shoulders. The cattle, we were told, were driven to higher areas for feeding during the summer, from whence the milk was brought down by truck and tram. Manufacturing, small instruments and watch parts, is parcelled out to the community homes during the winter season.

Lucerne is a shopper's paradise. We must have seen five thousand watches in the windows of the leading jewelers in the four or five blocks in the center of the city, not to mention music boxes, musical clocks and linens. Here is where we most depleted the exchequer, dishing out the Swiss francs like make-believe money at a millionaire's party, but we had fun doing it and we received great pleasure in dispensing our loot to our friends and family.

The trip to the top of Mount Rigi, across the lake by steamer and then up a cog railway, seemed like going atop the world. Beautiful and large resort hotels dotted the way up while at the end of the railway an exceedingly large one seemed to set astride the ridge. At the height we experienced the character-

istic light-headedness as well as the rubber in our legs! Looking almost directly down on the other side into a green valley with a varied pattern of farms was awe-inspiring. The native Swiss in those areas, we noted, wore heavy hob-nailed shoes and carried the proverbial cane with a pointed metal end—a sort of pusher to help them along the steep slopes. We stopped at a little inn atop the mountain for the needed stimulation of afternoon tea. The little Swiss waitress there was much embarassed at the size of my tip, stating it was too much and returning a portion of it. The reason, of course, was my unfamiliarity with the Swiss franc and its value, yet I wish it known and handed down to posterity that once upon a time a McBride tipped overabundantly !?!

Our train trip across the country to Interlocken and Montreaux was exceptionally interesting. To cross their rugged lands the Swiss use a combination of tunnels and cogs. Where the mountains are too high they tunnel through but where smaller they use the cog rail system to get up into the passes. Interlocken reminded us of Mackinac Island, only the city is larger. It is situated in a valley at the foot of the famous Jung Frau which most all the Swiss have endeavored to climb. The snow cap on top was plainly visible. Montreaux is another of the famous Swiss resorts and our hotel there—the Palace—was about as large as the Grand on Mackinac Island. We drew the choice room of our trip at this hotel for it was large with doors opening onto a balcony with chairs and a table. We felt like the Rockefellers sitting there one morning eating our breakfast while looking out onto Lake Geneva, down its shore to the Castle of Chillon and across to the mountainous shore of France! 'Twas luxury indeed to awaken and brush aside one's sleepy winkers amid much majestic splendor.

In Paris we were lodged at the Grand Hotel just off the main square of the city, which was the official headquarters for the English and American Officers in the two world wars and was the German Officers club during the Occupation of '43-'44. Repairs are still going on. At the French border we were given bread coupons, something we had not experienced thus far.

The Paris tours took us to Napoleon's and Marshall Foch's tombs, to the famed Madeline church where the Pope crowned Napoleon emperor of France, the Artist quarters, down the Champs Elysee to the Eifel Tower and through the mammoth palace of Versaille, the home of the French kings during the 17th and 18th century.

We ate and had tea as often as we could at the Rue de la Paix sidewalk cafe on the main square because 'tis said if you sit there for an hour watching the crowds go by you will see an old friend. Unfortunately however we failed to find a friend. We did our share of shopping in Paris and one afternoon I visited the Eastman Dental Clinic. Our impressions of Paris did not come up to the advance publicity. We went there with the idea that Mrs. McBride must return with a French gown but those lavish gown stores we read about and saw in the rotogravure and the movies were not in evidence. In fact the shops and department stores we thought very ordinary. The people dress ordinarily as well—or else we didn't see the right people. We looked for glamour and tinsel but found only a large city of uniform buildings, old and unkept, and with boulevard and sidewalk restaurants which looked much better on postal cards than in reality.

LONDON AGAIN

Our American Express tour terminated in Paris, except for the postponed return trip on the *Queen Elizabeth,* so we bid our tour friends good-bye there and took a plane for London to participate in the dental convention.

The Dental Society affairs, that is the social events, took us to a formal cocktail party at 96 Picadilly one evening, while I attended two formal dinners for the men on the two successive evenings. One was held at the Royal College of Surgeons, where Lord Webb Johnson, its president, presided; the other at the Savoy Hotel. Britain may be short on food, yet there was no evidence on these three occasions that there was any current shortage in the beverage supply! The dental society at-

tendance was much less in numbers than we have here in the States though the program was well planned and the men seemed intensely interested. It was their first convention since before the war. My two lecture assignments seemed to be well received. To complete the dental calendar I visited the Eastman Dental Infirmary on the last day, having lunch at the institution with the director.

We attended the opening exercises of the Olympics with tickets the dental society had procured in advance, and witnessed perhaps the most spectacular and thrilling events we had seen anywhere. Wimbley Stadium, with a seating capacity of 82,000 was all dressed up for the occasion.

Leaving the stadium we found ourselves in the midst of a crowd awaiting the departure of the royal party. So we waited too and were amply repaid for we saw a great many of the lords and ladies getting into their cars, many ambassadors from foreign countries, and finally came the Queen Mother in her car followed by one bearing the King and Queen and Princess Margaret.

IRELAND — SCOTLAND SCANDINAVIA

We were told the plane flight over the Irish Sea and the Isle of Man was always fraught with peculiar air currents and rough going but ours was a serene trip. We found Ireland's terrain a green green with millions of little farms, it seemed from the air, surrounded by hedge rows and with little lane-like roads. And as we scuffed the old sod at the airport we found it quite the same terra firma as we have here in Michigan or Ohio, only greener! The quaint little plaster-covered homes one finds close by the highways with the flowers by the door give it contrast and a homely aspect.

We learned that Ireland, like all other European countries was heavy on exports and most of the Irish linens could be found in other countries. But we did make one purchase—we followed an old and constant yearning to some day be filthy rich. We stepped in and bought a $2.00 sweepstake ticket to be run off this October. We hereby give you warning, friends, that you should expect little from us socially after next October! We learned, too, that Ireland is one country whose population is diminishing in the interest of immigration to the U. S. In 1880 its population was five million; in 1900, four million; in 1938, less than three million. What a lot of cops the immigrants must provide for the City of New York!

Sunday morning we went around the corner from our hotel to services in the old and oddly shaped Presbyterian Church. The pews were high and the seats uncomfortable yet the service was excellent and we enjoyed the pastor who took us in hand after the service. He talked much about the quaintness of the old church and about the bombing which destroyed a portion of the building and finally gave us a copy of its history which he had written for its three hundredth anniversary held in 1944. In it is tributory reference to its first pastor, one John McBride, whom the present pastor told us about in detail and had showed us his portrait. We wondered, realizing that Grandfather McBride had come from near Dublin, whether the branches of our family tree might not be further scanned in the hopes of finding some lineal descendancy from this colorful gentleman.

Ireland is not at all impressive. Its apparent lack of thrift, its climate, its depleted soil, all seem to give ample reason why its young people so regularly look to a greater land of promise on the sidewalks of New York.

In Edinburgh we had reservations at the Roxborough Hotel, a more or less residential hotel at the edge of the business district and just off the famous Princes street. Scotland might well be proud of this city and the universal boast that Princes street is the prettiest street in the world. With its fine stores on one side and with the huge city park on the other, terminating in castle rock and the castle grounds, it is indeed a picture.

We saw little of Glasgow except its business section and its business street which bears the peculiar name of Sauci Hall. Glasgow is definitely the business center of Scotland. It is a great shipping port and shipbuilding is a major industry. Like Detroit its airport is distant from the city—28 miles. We wondered in this rugged and hilly country if they might

not have found it necessary to have gone that far out of the city to find a spot sufficiently level and large for an airport.

On our tour of Edinburgh we had the finest guide of the whole trip—a graying cultured Scotch gentleman with a flair for good expression and with a fine sense of humor. He poked a lot of good-natured fun at us Americans and the British as well, climaxing his stories with the one concerning the fact that when the King of England and his Scottish Queen come up to the castle in Scotland he is not spoken of as the King of England but rather as the Queen's husband. The famous Castle Rock and the castle high atop the city dates back to before Christ, with constant additions through the centuries until now it is a fortress of great dimension which houses the splendid war memorial of which the Scots are duly proud. A memorial to both Scott and Burns are within the city. Hollywood Palace, in Edinburgh, to which the King and Queen make annual pilgrimage in May, is a lovely place. The famous Mary, Queen of the Scots, lived there during her reign. The huge cathedral, headquarters of the Presbyterian Church of Scotland, houses some of the most picturesque stained glass windows we had seen on our tour. Within the cathedral is the Knights of the Thistle Chapel, an order which is to the aristocracy of Scotland what the Knights of the Garter is to England.

The Trossachs tour, up in the highlands of Scotland, past lake Katrine and Loch Lomond, was indeed interesting. We saw the famous purple heather not yet in its full radiance and saw the flocks of blackfaced and horned sheep high up on the mountain sides. Lake Katrine is specifically listed as the only lake in Scotland—all the rest are Lochs.

Our time in Norway was abbreviated because we were forced to delay our flight from Edinburgh one day. We went directly across the North Sea—a four and a half hour flight—landing first on the southeasterly tip of Norway, at Stavenger. A shore line always looks inviting from the air, and this looked particularly so with its farms running right down to the sea. This little farming plateau fades away fifteen to twenty miles inland, however, and from there directly across to Oslo, which is almost on the eastern border near Sweden, we crossed very rugged mountain areas with ice-filled lakes high above the timber line. At the border we had to open our bags to customs for the first time on the trip, a procedure which we later learned we had to follow both entering and leaving the Scandinavian countries. On the American Express Tour, partly because we were traveling in a group and partly we suspect from the influence of our tour manager, none had ever opened a bag for inspection.

Oslo is a small city so the tour was brief but we saw in a huge museum a replica of the large black Viking ship from the days of old which former Queen Osa is supposed to have owned. 'Twas the same ship they brought to the World's Fair in Chicago. Also, we saw Amundsen's ship, the one he used in exploring the north pole region, and in which we were permitted to go to see the cabins, the instruments, and the reinforcements at the bow made to withstand the great pressure of the ice. The King's palace is in a huge park on the hill at the end of the main street and only four or five blocks from the center of the city. Scandinavia is very democratic, with less pomp and pageantry than England so the palaces are less pretentious, with an obvious decrease in the number of guards.

Particularly apparent was the height of the Norwegian people. As we lunched in an open-air cafe and watched the passers-by we were amazed to see how many six-footers, of both sexes, there were.

'Twas a short flight to Stockholm, only two hours. There we stopped at the Grand Hotel, a magnificent place on the waterfront, just across the canal from a small island on which is located the King's palace. The food at the hotel, and in general in the city, was excellent and there seemed to be plenty though we were given ration cards at Customs which we were forced to present for each meal.

Stockholm, located on the east coast of Sweden, is called the Venice of the North, being built on a succession of neighboring islands with a portion spilling over on a peninsular mainland. Channels serve as avenues of travel and bridges connecting the islands are numerous. The King's palace is on a small

island, called the older part of the city, while the parliament building alone stands on another, a small channel connecting the two. The tour of the city was unusual in that it was part by motor launch and part by bus.

We were struck by the modern architecture of the city and its colorful modern apartments —streets upon streets of them. The large picture windows so uniform there, and just taking hold in America, sprung from their desire to capture as much light as possible from the dull sunless days so common there a great portion of the year. We were told that over 90% of the population lived in apartments. Why? Principally because of the lack of transportation—thus the people are better off close together. In this socialistic country where the sick are cared for, and the aged pensioned and provided with homes, one cannot buy a car unless permitted by his government, unless the buyer can prove his income adequate. He must show his income is adequate to pay his rent, his taxes, which are inordinately high, his food bill, his clothing bill and then if there is sufficient left he may purchase a car. Consequently there are few automobiles and, like elsewhere in Europe, there are thousands and thousands of bicycles.

The Eastman Dental Clinic in Stockholm was on my agenda. It was particularly light and attractive with the equipment finished in a pleasing blue. It seemed the best organized of any and the work they are turning out is a credit to any institution.

Copenhagen, a city of a million and Denmark's capital, is located on the easterly border of Denmark just across the sound from the tip of Sweden. It is two hours by air from Stockholm.

The Danes were not as tall as the Norwegians but they had one noticeable similarity, they liked to eat and drink. The drinks served with the meals were like those in Norway, both wine and beer being served simultaneously, the beer being used as a chaser. Some of the women folks in the restaurants, we noted, smoked small cigars instead of cigarettes. And not daintily mild ones either, they were the real McCoy if one could judge by the aroma! Hardy folks these Danes!

The Danish language is evidently more difficult and very dissimilar to other languages for we were unable there to decipher the street signs or menus. Usually we could figure out something intelligible from signs or the printed page but here we were quite at sea. Where the Swedes use the term "gatan" for their thoroughfares or streets the Danes used "gade." But where the Swedes frequently keep the street name and the street separate as "Dallas Gatan" the Danes run the two together, making lengthy names, such as Oosterbrogade, many of which are difficult to pronounce.

We flew back from Copenhagen across the North Sea, leaving early in the morning and arriving in London after lunch. Again we stopped at the Cumberland Hotel. We had left part of our luggage and laundry there before flying to Ireland and Scandinavia so we found it a convenient place to light again. That evening we entertained our new-found relation whom we visited during our first few days in London—those who dangle on other branches of the McBride family tree. Packed and on our way the next noon, we had lunch enroute to Southampton aboard the boat train and having passed Customs found ourselves in our cabin on the *Queen Elizabeth* just in time for tea.

HOMEWARD BOUND

The last evening out we were entertained by Phil Harris, Harry Richman, and Sophie Tucker, all of whom were returning home from engagements abroad. The sports commentator, Bill Stearn, was aboard as were five returning Olympic Champions whom he told us about and then introduced; Mrs. Draves the high diver, the champion broad jumper from Jamaica, the champion wrestler from Iowa State, the half-mile winner from Los Angeles and a champion short distance sprinter from Jackson, Michigan.

As we left the dock at Southampton and our ship was being towed backward and turned around in the harbor by three stalwart and chugging tugs, the *Queen's* Captain Ford, was on the aft bridge directing the procedure. We were close by—on the sun deck some 20 feet away—so we had a good gander at him during the half hours time and though it was a bit late for color film we attempted a few

shots. He's a fine looking individual who looked and dressed the part and we stood by with mouth agape because there's enough hero worshiper in all of us to respect anyone who is tops in his field. And any skipper who can draw the assignment of piloting the greatest ship afloat must be tops.

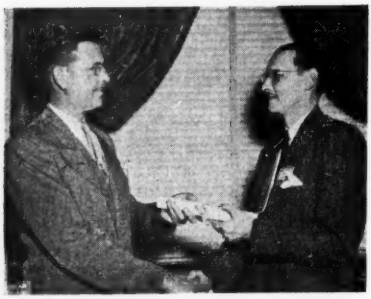
It is 3125 miles from Southampton to New York. In the winter season when they go farther south to avail themselves of better weather the distance is increased by 200 miles. Going over we spent 125 hours at sea; returning 123; thus it is approximately just a few hours over five days each way. The harbor pilot comes aboard quite a way off Long Island, while the immigration officers get on at Quarantine near Ellis Island. Truly the Statue of Liberty and New York's famed sky line were welcome scenes as we came up the harbor.

Arriving in New York at six p.m. and being through customs at 8 o'clock we speculated on being able to get reservations on the 11 o'clock train for Detroit and luckily acquired them. Then with our bags checked in at Central Station we set out for Schrafts to acquire what Hilda had been hankering for for days, an American Chocolate Soda. When we saw the array of available candy in the store—more than we had seen all told in eight weeks—we remarked what would a candy starved European do in a place like this. On the train home three things convinced us we were again in the land of plenty; the American toilet paper, cream for our cereal, and unburned hot toast.

Coming home, after such a prolonged and adventuresome vacation, aroused a peculiar emotion—not lonesomeness, not disappointment, but more like the closing of the curtain on a lovely scene, we felt when we left Copenhagen that the trip was over with the exception of our physical transportation home. And as we crossed the familiar terrain of Canada, between Buffalo and Detroit, on the last lap of our journey we were reminded of a very indelible occasion we had experienced in Scotland. We were standing this day in the spacious grounds of Hollywood Palace in the mountain-encircled city of Edinburgh listening to our scholarly Scotch guide tell of the wonders of Scotland of which the Scottish poets have written so lovingly. Pointing panoramically to the mountains he said, "Those are the hills that Stevenson loved and for which he longed when ill and at his journey's end, and which engendered his immortal poem, Requiem, the last three lines of which are inscribed on his tomb:

> Here he lies where he longed to be
> Home is the sailor, home from the sea
> And the hunter home from the hills."

660 Fisher Bldg.



Retiring President Mott Erwin and Doctor Carlos A. Criner, President of the Sociedad Cubana de Odontolgia Infantil—A.S.D.C. Luncheon —Chicago, September, 1948.

EDITOR'S NOTE

During the business sessions of our Society at Chicago last month, several questions arose about the American Board of Pedodontics. The following statements from Dr. John Brauer, Chairman, and Dr. Ralph Ireland, Secretary, should help to clarify several points. *A. E. S.*

The American Board of Pedodontics was organized by the American Society of Dentistry for Children in 1940. Articles of Incorporation were signed and acknowledged by the incorporators in 1942 for the purpose of forming a non-profit corporation under the provisions of Act No. 327 of the Public Acts of 1931, known as the Michigan General Corporation Act.

The purposes of the American Board of Pedodontics are:

"To encourage the study, improve the practice, elevate the standards and advance the science of Pedodontics, and thereby to serve the cause of public health.

To grant and issue to dentists duly licensed by law, Certificates or other recognition of special knowledge in Pedodontics or Dentistry for Children and to suspend and revoke the same.

Certificates granted or issued by the American Board of Pedodontics shall not confer or purport to confer upon any person any legal qualifications, privilege, or license to practice dentistry nor purport to be issued under or in pursuance to or by virtue of any statutory or governmental sanction or authority. Recipients of certificates shall not by virtue thereof become members of the Corporation, nor shall they be entitled to vote on any matter whatsoever.

To receive and act upon applications from dentists duly licensed by law, for certificates and to require the payment of and to receive from each applicant therefor, application, examination and other fees in such amount as from time to time may be fixed by the American Society of Dentistry for Children.

To establish, maintain, alter and amend rules and regulations, standards and qualifications for the granting and issuing and for the suspension, surrender and revocation of certificates.

To determine by examination, investigation or otherwise, the fitness and competence of dentists in the practice of Dentistry for Children who shall apply for certificates, and to prepare, provide, control and conduct examination, written, oral and otherwise for such purpose, and to determine the results of such examinations.

To do all such other lawful acts and things as may be pertinent, incidental or conducive to, or necessary, suitable and proper for the accomplishment of any of the purposes or the attainment of any of the objects, or the furtherance of any of the powers herein set forth or growing out of, or connected therewith, or with any part thereof, and generally and in pursuance thereto, to have and to exercise all the powers now or hereafter conferred by the laws of the State of Michigan, upon corporations organized under the laws under which this corporation is organized, and any and all acts amendatory thereto and supplemental thereto.

To conduct its business so far as permitted by law in the State of Michigan and other states of the United States, and in the territories and District of Columbia, and all dependencies and colonies or possessions of the United States, and in foreign countries, and to maintain offices or agencies within or anywhere without the State of Michigan."

The American Board of Pedodontics is financed under the following general plan: Sums of money are from time to time appropriated by the American Society of Dentistry for Children for the purpose of carrying out the functions of the Board; Any fees paid for

examinations or certificates belong to the American Society of Dentistry for Children.

The American Board of Pedodontics consists of such persons elected thereto by the American Society of Dentistry for Children. The term of membership upon the Board is determined by the By-Laws of the American Society of Dentistry for Children. The names of the present members of the American Board of Pedodontics are:

John C. Brauer, Chairman
Frank F. Lamons, Vice-chairman
Ralph L. Ireland, Secretary-Treasurer
Kenneth A. Easlick
Charles A. Sweet
Walter J. Pelton
Paul K. Losch

The American Board of Pedodontics will hold its first examination on Friday and Saturday, February 11-12, 1949, at Northwestern University, School of Dentistry, Chicago, Illinois.

Certification by American Board of Pedodontics Interpretation of Section III: Waivers

There has been some misunderstanding regarding the interpretation and provisions set forth in the section pertaining to Waivers in the "Requirements for Certification by the American Board of Pedodontics." The following was published in the *Journal of Dentistry for Children*, Second Quarter, 1948.

"III Waivers. The board may grant a waiver in the requirements listed in Section II, until January 1, 1951, provided:

A. The candidate submits evidence that for the past ten years:
   (1) He has directed his interest primarily to the practice of pedodontics; or
   (2) He has been identified in teach primarily in the field of pedodontics; or
   (3) He had made outstanding contributions to the science of pedodontics.
   The board in such cases, as referred to in Section III A, may elect to waive the requirements set forth in Section IV.
B. He has been in the practice of dentistry for a period of ten years, and further, that for the past three (3) years he has limited his practice primarily to pedodontics.

"IV. Secure a satisfactory grade in the written, in the clinical, and/or oral examination as may be required by the board."

The last sentence in Section III A, "The board in such cases, as referred to in Section III A, may elect to waive the requirements set forth in Section IV," seems to be the area in question. With reference to this point, the board was given definite instructions from the Council on Dental Education as to the number which might be selected under the provisions of this clause. The board had to commit itself regarding the number of waivers of examinations prior to receiving formal approval from the Council. This action was consistent with the organization of the other boards for the other specialties, and further it was consistent with the intent of the House of Delegates of the American Dental Association, when it gave authority for the approval of boards to the Council on Dental Education. Accordingly, the Board submitted the names of 15 dentists to the Council on Dental Education as charter members, who in the opinion of the board warranted such recognition and who were extended the privilege of this phase of the waiver clause.

Without question there are individuals who are qualified equally as well as those who were granted this waiver of examination. It was impossible to attain a true evaluation of all the dentists in this country, and there was no alternative but to select those who had been identified actively with this specialty, and who further were well known to the board.

The privilege of waiver of examination no longer exists, and in accordance with the provisions set forth by the Council, the board now is obligated to examine all candidates, who in the opinion of the board meet the requirements listed in Sections I, II, or III of the "Requirements for Certification."

The board is privileged to examine and certify candidates under the provisions of the Section of Waivers (less the clause "the board in such cases, as referred to in Section III A, may elect to waive the requirements set forth in Section IV") until January 1, 1951.

Individuals who are interested in the exact requirements and details of the examination, and the items which the candidate must submit prior to or at the time of the examination, should write Dr. Ralph Ireland, Secretary of the American Board of Pedodontics, University of Nebraska, School of Dentistry, Lincoln, Nebraska.

JOHN C. BRAUER, *Chairman*
American Board of Pedodontics
October 4, 1948

BOOK REVIEW

"GROWTH, DEVELOPMENT and HEALTH PROBLEMS in DENTISTRY," published by the THE OVERBECK COMPANY of ANN ARBOR, MICHIGAN. Compiled by two University of Michigan graduate students, Drs. Paul F. Sydow and Hugh M. Kopel, with the aid of an editorial board, it is a result of a teaching plan whereby Junior students of the U. of M. School of Dentistry have been assigned by the department of Dentistry for Children a group of questions pertinent to growth, development and health problems. The questions had to be answered with the most authoritative information available at the time and the reference had to be given accurately. The exercise was assigned to acquaint the student with dental literature and to give him experience in the evaluation of the printed word.

The knowledge which was gathered by such assignments is of great value to the profession as a whole and should be distributed. To use the words of Sydow and Kopel, ". . . such as extensive expenditure of work and time in the exploration of dental literature . . . appears too valuable to warrant mere burial in a professor's file."

The book presents 377 questions, which are answered and references are quoted. The topics covered are Anesthesia, Oral Surgery, Anomalies of Dentition, Child Behavior and Development, Dental Caries, Endocrinal Effects, Fluoride Studies, Occlusion, Tooth Development and others.

The following questions will give indication of the contents.

1. Why are mottled teeth susceptible to attack by dental caries than other teeth?
2. Should incisors be extracted at birth or during the first two months of life?
3. Will the loss of primary incisors in the preschool period cause a speech defect?
4. Does sleeping on one's fist cause malocclusions?
5. Should the frenum lingua be clipped when a tongue-tie is detected in a preschool patient?
6. Should a large labium frenum be removed surgically from between spaced centrals of a child?
7. Can extractions be performed safely during pregnancy?
8. What points of diagnosis assist an oral surgeon to reach a decision regarding the time to operate the cleft lip when this developmental abnormality is accompanied by a complete cleft palate?

"GROWTH DEVELOPMENT and HEALTH PROBLEMS in DENTISTRY" is priced at $2.50, and may be obtained on request from the publisher. The book is so well indexed that it is bound to be used in a busy dentist's library.

Melvin Noonan.

AROUND THE COUNTRY

Boy, Oh Boy! What a job this trip. Do I start with the formal material sent to me by a few—or do I take out the little blue book which was filled with observations made at the Chicago A.S.D.C. and A.D.A. meeting?

Some men take their Children's Dentistry more seriously than others and here is the prize story from Cortersville, Georgia. A.S.D.C.'er *Dr. Harold Lowry,* while preparing his child patients for school actually and unfortunately inherited the MUMPS from one of them and was confied to his home for ten days!

Here are some really serious thoughts regarding California from our one reliable column reporter—*Chuck Sweet* (*Charlie's* son— and we did not see old *Charlie* at the Chicago meeting! Getting wise or just old, *Charlie?*) *Chuck* gives us the report on the doings of the Northern California groups. If I don't report this correctly, it is because I can't read his long hand any better than my own—but keep it coming anyway!

Old *Irwin "Got Rocks" Beechan* proves the saying that there is money in dentistry; first, by buying a block long Buick, secondly, by buying a servant stuffed mansion, and thirdly, giving forth with the statement that a little income tax deduction was born last week. (The deduction weighed 6 pounds.)

Paul Sikora is doing well in Ukiah, a suburb of Blue Lakes. When *Paul* is not doing dentistry he is raising one of the nicest flower gardens in his City. (I too have a flower garden, but my good wife makes and *works* it!)

Carl Ellertson, Jr., of Palo-Alto has recovered from an illness that had been plaguing him for the past several years. *Carl* has had every known disease Mother Nature ever thought of. The doctors instead of giving him multiple doses of sulfa, penicillin, rabies serum, gave him four-fifths of *John "Pills" Hughes'* blood. *John* has been taking pills, shots, drops and what have you, therefore his blood is a natural antibody for any organism. He calls his blood "Old Grandaddy."

Ralph Wagner, an Ex-President of the California State Dental Society and long time member of A.S.D.C. was in Utah this summer where he appeared on the Pacific Coast Program between heat waves.

A new member of the A.S.D.C. is *Bernie Smith,* who is opening his office on Pill Hill in Oakland. *Bernie* is home after a tour of duty in the Navy and going to Michigan for a Master's Degree in Dentistry for Children. He will do part time teaching at the College of Physicians and Surgeons.

Charlie Sweet, Sr., appeared on the Colorado State Program, his subject of course, "Dentistry for Children." Now that the College of Physicians and Surgeons has finished its fine new buildings, each equipped with new Master Units and all the trimmings, this Fall will start a new Postgraduate Research program in many fields of Dentistry for Children. One of the men working under *Charlie* will be a former classmate of *Chuck's, Francis Barrying* of Rudine. *Chuck* says if *Francis* puts as much time on his work as he does the women he could solve every problem from Moscow down!

Louis De Meo hasn't been heard from in quite a while! *Louis* is on vacation, his first one in two months.

Chet Daglish, the trustee from our District is flying to Hawaii for the State Department of Health of N. Cal. *Chet* sure is a busy boy.

The Northern California Unit of A.C.D.C., better known as *"Dr. Al Seyler Fan Club"* will hold its first meeting in Oct. at the Robin Hood Inn in Oakland. The date is Wednesday, October 27th. We hope for a big turnout. *If we only had a* 10 *foot picture of Al Seyler things would be fine.* (*Al* says he sees no reason for a fan in California.)

Ed Randall, the San Francisco's fair-haired boy reports nothing new—still working hard, playing hard, nothing a major operation can't cure.

John Hughes was on the Pacific Coast Program and also spoke over the radio regarding

sodium fluoride.

Our touring Scotchman, *Walter McBride,* has returned to his native land. He lost eleven pounds and blamed it on lack of food. Some of us wonder, we just wonder. Every time he and his good wife moved from airport to airport (Switzerland, England, France, etc.) it cost $4.00! With *Mac's* trick stomach one can eat for a week on $4.00.

And talk about being lazy! *Mac* wrote that it was an effort just waiting in his deck chair until the boy came along to fold his hands! I really think that *Hilda* wrote all his picture post cards. But elsewhere in this issue we hope that *Mac* gives us a full report of his European trip.

Double news regarding Wyoming. The Division of Dental Health, State Department of Public Health, has been conducting a fluoride determination. Whereas the work is not yet completed, the workers report that at this moment they have found the 0.5 ppm. fluorinated water supply to be nearly as effective in controlling caries as is the "ideal" 1.0 ppm. fluorinated water. A complete manuscript of the study is being prepared and should be available in the near future.

On the lighter side of the Wyoming news is a report by *Ray Taylor* on his wonderful trip through the State. Converging at the home of *Jack Pelton,* Denver, Colorado, were the following travelers: *Pokey Arnold* (just appointed Director of Research at Bethesda, Maryland), *Ken Easlick* (our International nual Wyoming State Dental Meeting. *Arnold* and *Easlick* were on the program, and from Authority on Scientific Procedures) and the *Taylors* (our gal *Lee* and husband *Ray*). *Jack* as you know is District Dental Director for U. S. Public Health Service in the Rocky Mt. to Rock Springs, Wyoming, to attend the anunholy, as you see it) proceeded to drive up and Western Districts. This gang (holy and what your reporter can learn they had a bad time with the hecklers. Following the meeting about seven other travelers joined the party for a trip up through Jackson, Wyoming and into Yellowstone Park and back to Casper, Wyoming. *Carp Carpenter* and his lovely wife acted as official guides and are most highly recommended from every viewpoint. Rush your reservations now! *Dr.* and *Mrs. Drew* (also of Casper) acted as assistant guides, and are equally recommended. *Phil Jay* and wife *Edith* were scheduled to make the trip but wedding bells for his good friends *Drs. Bunting* and *Hard* postponed the trip. Just postponed too, because the *Jays* did make the trip later and are now back in Ann Arbor.

Yes folks. We are most happy to report that *Ray Taylor* (member of the Editorial Board) is back on the job at his old stand in Lansing. *Ray* was involved in a serious accident this summer. He was laid up for some time but under the expert care of his good wife *Lee,* the old boy came back strong. The *Taylors* are in the market for a good car though!

From Denver, we learn that *Tobie Weissman* could not attend the A.D.A. meeting in Chicago because he was scheduled to register at Columbia University in New York on the 13th for a course in Orthodontics. *Tobie* has been a member of the A.S.D.C. for about five years and will continue his membership even though he is going into the ranks of specialists. We just hope that not all our good A.S.D.C. members desert the field of general practice. However, it may lead to the point where a family practitioner is the specialist! When this happens perhaps more dentistry for children will be accomplished.

Down Ohio way (Youngstown) we have an A.S.D.C. member who has a most unique way of providing a high grade dental health service for those frightened youngsters. *Dr. John Westerfield* has developed a procedure whereby he does considerable operative work under N_2O for two and one half hours, all needed dental work completed under conditions of dryness of the operative field, and a relaxed cooperative patient which permitted high calibre services. Now boys, *John* may have something. Your reporter hopes to visit his office some time in November.

I just do not know how much *Boss Al* is going to report elsewhere in this issue regarding the A.S.D.C. annual meeting held in Chicago, but your reporter feels that he should

give you at least a cross section of what he saw and heard.

In my opinion this was the finest convention I ever attended. Arrangements, hospitality, attendance and calibre of clinics could not have been better or more balanced. Both the A.S.D.C. meetings and the Children's Section of the A.D.A. were so well arranged that one did not need a city map to locate the assigned meeting places.

Hospitality seemed to follow the motto by Emerson, "Life is never so hurried that there is no time for courtesy." Everywhere I went I found this motto being followed (even at the night club where Andy and I lost our money, where the gals who took us were courteous and certainly in no hurry!)

The attendance at all our sessions was most heartening. It made one realize that dentistry for children had really grown up and that we must now face new and tougher problems. Believe it or not, on Monday our children's section attracted a larger attendance than the economics section. Can you think of better dental economics than dentistry for children?

The subject matter assigned and the clinicians selected by the committee on dentistry for children *Bob Downs,* Denver — *Mighty Mite Ralph Ireland,* Nebraska—*John Chrietzberg,* Illinois, did an outstanding job. Diet, Amalgam Restoration, Cavity Preparation, Selection of Matrix, Structural and Morphological Consideration of Primary Molars, Sodium Fluoride evaluation. Could one ask for a more balanced program, and could one afford to miss this marvelous post-graduate opportunity? The A.S.D.C. meeting held on Saturday, Sunday and Monday, was the best and largest ever conducted. When you can witness a "little house of delegates" meeting at one of our meetings you must realize that we are out of our three cornered pants stage of growing up.

And the forum we had regarding the outstanding piece of progressive work rendered by our American Board of Pedodontics, *Drs. Brauer* and *Ireland* must be congratulated for their untiring efforts in behalf of this Board. Dentistry for children now has National recognition with other specialty offspring of our great health profession, something we all desired but dared not expect to become a reality. But here it is, and our thanks and deep appreciation must go to *John* and *Ralph* and their fine Board.

Walter McFall is again devoting a major part of his time to lectures around the country on dentistry for children. He has seven appearances lined up for the next few months, in addition to his duties as President-elect of the North Carolina Dental Society.

President Al Seyler is also stumping for the dentistry for children and A.S.D.C. cause, being on the program at Louisville, Kentucky early in November.

Our staunch Canadian evangelist of good dentistry for children, *Sandy MacGregor,* seems to be conducting a one-man membership campaign in the Dominion. We have received ten new members from all over Canada within the past few weeks, which pleases *Bill Taub,* our Unit "promotion manager." Incidentally we missed *Sandy* at the September A.D.A. meeting.

Past-President Mott Erwin appeared before the Portland Pediatric Society as speaker for their October meeting, covering in his own forceful manner the relationship between pediatrics and pedodontics and discussing mutual problems. We would like to see more of such interchange of speakers and ideas throughout the whole United States and Canada.

From *Joe Cabot* of our Michigan Unit:

During the ensuing year the activities of the A.S.D.C. will be capably guided by the following officers:

President: *Joseph T. Hartsook.*

Vice-President: *Harold A. Maxmen.*

Secretary and Treasurer: *Roy Brooks.*

Councilmen: *Samuel Stulberg, Wm. C. Quinlan, Philip Blackerby, Louis Braun.*

The Society's regular program for the coming year is varied both in subject matter and locale, in an effort to provide good meetings and changes of environment. This year one meeting will be held at Ann Arbor to enable more outstate members to attend. The program committee has secured an excellent group of speakers who have much to contribute in fields closely related to, or integrated with, the practice of dentistry for chil-

dren. The program is as follows:

1. October 6. 1948. *Norbert M. Bittrick, M. D.* "Hospitalization and General Anesthesia for the Child Patient." Place: Stockholm Restaurant—Detroit.
2. December 1, 1948. Panel Discussion: Problems Pertinent to the Practice of Pedodontics." *Alfred E. Seyler,* Moderator. Oral Pathologist, *Donald Kerr, D.D.S.* Orthodontist, *Louis Braun, D.D.S.,* Pediatrician, *Ernest Watson, M.D.* Pedodontist, *Kenneth Easlick, D.D.S.* Psychiatrist, *James Cunningham, M.D.* Place: Michigan Union—Ann Arbor.
3. January 31, 1949. Second Annual Michigan Children's Dental Health Day. Place: Statler Hotel—Detroit.
4. March 2, 1949. *Floyd A. Peyton, Ph.D.* "An Evaluation of Dental Materials Used in Pedodontics." Place: Huyler's L'Aiglon Restaurant—Detroit.
5. April 13, 1949. Election Meeting. *Alfred E. Seyler, D.D.S.* "Summary and Evaluation of the Past Year's Activities of the American Society of Dentistry for Children." Place: Statler Hotel—Detroit.

President Joe Hartsook has established a "Professional Relations Committee," chairmanned by *Al Seyler.* It is intended to present clinics on dentistry for children to dental societies throughout the state, and already there have been six requests for appearances. The "teams" of clinicians are chosen from licensed pedodontists and M.S.D.C. members, who offer their help. *Mel Noonan, Joe Cabot, Sam Stulberg, Hugh Kopel, Ross Scharfenberg,* and *Bill Brown* have been signed as participants, with *Al Seyler* or *Joe Hartsook* as moderator for the programs. A note to *Joe* at the University of Michigan will bring further information for any Unit who might like to try this plan.

Dave Law, former associate of George Teuscher, now working with John Brauer at Seattle, recently returned from an Alaskan jaunt of some 4,000 miles. Travelling by air, Dave was dental member of an A.M.A. group which surveyed health conditions in the area for the Department of Interior. "It was a most unusual and interesting experience," writes Dave.

This department is conducted by Stan Brown. Please direct items of interest to him at Ithaca, Michigan.

Incoming President Seyler presents the Past President's plaque to Mott Erwin. National meeting—Chicago, September, 1948.

At What Age Do *You* Stop Caring for the Primary Molars?

ELLEN BATES CROCKETT, D.D.S.
Miami Beach, Florida

EDITOR'S NOTE

After reading again the last paragraph of Ellen Crockett's letter to us, dated October 2, 1947, we know that history does repeat itself—and we know we're never going to move to Florida!! Here it is—"The hurricane did not pass us by but it wasn't so bad here in Miami as the Northern papers said it was!"

Anyway, Ellen Bates Crockett graduated from the University of Michigan in 1945, married Fred Crockett, a graduate of Western Reserve School of Dentistry, in July, 1946, while Fred was stationed at San Diego. Transferred to Georgia, Fred suggested Ellen add to the family finances and found an opening for her in the Public Health Department at Columbus, where much of the information in this paper was gathered.

At present they are practicing in Miami Beach, where Fred was born, and things seem to be rolling along well for them—hurricanes notwithstanding!!

A. E. S.

In clinical practice one often hears the mother of a child say, "The dentist wouldn't fill or pull my son's tooth. He said it was only a baby tooth and would come out soon anyway." The boy may be eight or nine years old and exhibit anything from a small occlusal cavity which can be filled readily to a hopeless black stump with an apical abscess pushing through the buccal mucosa. Actually, how soon is this child going to lose that tooth? Did his dentist really know that he was going to lose the tooth soon or was he just guessing because some children do lose their primary molars at this age?

Certainly, the care of the primary molars along with that of the permanent first molars constitutes the greatest problem that the dentist who serves children has to face. Therefore it seems worthwhile to review the normal or average development and life expectancy of the primary molars and the development of their successors, the bicuspids.

The primary first molars erupt when the child is about a year old and are lost at about ten years unless prematurely removed. The primary second molars erupt at about the second year and are retained until the age of eleven years on the average. Thus the primary molars have a life expectancy of nine years or more. The fact that for so many children this life expectancy if cut in half is not a credit to those whose responsibility it is to care for them.

Having studied the table of normal behavior of primary molars, one still is faced with the question of how soon a child patient is going to lose a specific tooth. Even assuming that the tooth will behave normally there is a two year period in which to guess. Without radiograms the operator does not really know since the firmness or mobility of a tooth can be deceptive. Teeth with the roots completely resorbed can appear quite solid while sometimes a tooth which seems loose will have surprisingly long roots but partially resorbed.

With the aid of a set of posterior bite-wing radiograms the operator can calculate approximately how long it will be before the primary teeth will be replaced by their permanent successors and learn whether the successors are congenitally absent as they are not infrequently. In an analysis of the films, the operator should remember that resorption of the roots of the primary molars begins very early even before it does in the roots of the incisors and proceeds slowly over a period of six or seven years until the teeth are shed. The development of the succeeding bicuspids also deserves consideration. Completion of calcification of their crowns anticipates eruption by five years. The child at nine may have a bicuspid with a well developed crown and

partial root formation under a primary molar which has a half resorbed root yet it may be two or three years before the primary tooth exfoliates and bicuspid erupts.

CHRONOLOGY OF THE HUMAN DENTITION[1]

Primary Dentition

Tooth	*Eruption*	*Root Completed*	*Exfoliation*
Max.			
1st Molar	14 mo.	2½ yr.	9-11 yr.
1st Molar	24 mo.	3 yr.	10-12 yr.
Man.			
1st Molar	12 mo.	2¼ yr.	9-11 yr.
2nd Molar	20 mo.	3 yr.	10-12 yr.

Permanent Dentition

Tooth	*Hard Tissue Formation Begins*	*Enamel Completed*	*Eruption*	*Root Completed*
Max.				
1st Bic.	1½-1¾ yr.	5-6 yr.	10-11 yr.	12-13 yr.
2nd Bic.	2 -2¼ yr.	6-7 yr.	10-12 yr.	12-14 yr.
Man.				
1st Bic.	1¾-2 yr.	5-6 yr.	10-12 yr.	12-13 yr.
2nd Bic.	2¼-2½ yr.	6-7 yr.	11-12 yr.	13-14 yr.

A study was made of the teeth of the children treated in the dental clinic of Muscogee County (Columbus), Georgia. Data on the primary molars were compiled from the records of 363 school children ages five through fourteen years. Missing and previously filled teeth were not recorded but only those teeth that were extracted and filled at the clinic were included in the study. However, as the dental health program in Muscogee County was fairly new and the children were all indigent, most of them had never been to a dentist before except, perhaps, for an occasional emergency extraction. These data, therefore, indicate the condition of mouths that, on the whole, have never received any previous care.

In the clinic every decayed tooth was filled if possible no matter how small the cavity or what the age of the child. Abscessed, badly broken down, and partially loose, decayed teeth were extracted.

Treatment of Primary Molars of School Children, Muscogee County, Ga.

	Total	FIRST PRIMARY MOLARS			SECOND PRIMARY MOLARS		
Age	Number of Children Treated	Number of Children Treated	Number of Teeth Extracted	Number of Teeth Filled	Number of Children Treated	Number of Teeth Extracted	Number of Teeth Filled
5 yr.	14	12	3	32	14	2	40
6 yr.	36	33	15	77	34	21	79
7 yr.	31	30	25	63	28	24	70
8 yr.	48	46	29	81	43	37	80
9 yr.	38	25	25	27	32	36	44
10 yr.	41	17	17	18	26	24	33
11 yr.	67	12	9	13	30	32	29
12 yr.	46	3	2	2	7	8	2
13 yr.	27	0	0	0	4	3	5
15 yr.	15	0	0	0	0	0	0

In the accompanying table it may be seen that of the fourteen-year-olds treated, all fifteen had lost or exfoliated their primary molars by the time they came to the clinic but there were four thirteen-year-olds with an average of two second molars each in need of treatment. Five of these teeth appeared to be worth filling although they would undoubtedly be lost "soon." Three twelve-year-olds still had one or two primary first molars to be treated while seven of them had second molars to be extracted.

According to the table of normals, the eleven-year-olds should have shed most of their primary molars yet nearly one fifth of this age group still had primary first molars in need of care while nearly one half of them had second molars in a like condition. Two thirds of the ten-year-olds received dental care for their primary molars while nearly all of the nine-year-olds did so.

One also can note that five primary molars had to be extracted for five-year-olds and that thirty-six extractions were required for six-year olds, the latter making an average of one tooth per child treated in that age group. These data provide an indication of the great need of dental care for the preschool child.

The primary molars are such important teeth for mastication, space maintenance and health that every attempt should be made to retain them for their full life expectancy. A properly restored primary molar is the best device available to provide a child with the necessary masticatory surface and to maintain adequate space in which his permanent bicuspids may erupt. A broken-down tooth neither maintains space nor adds to the health and well-being of the young patient.

Before a mother is told, "That tooth will be lost soon," it is best to make sure that one knows *how* soon. Radiograms are a necessary aid to the visualization of what will happen to a carious tooth in one or two or three years if it is not treated. People frequently repair mechanical and electrical appliances that will give no more than two or three added years of service. Why shouldn't parents expect dentists to provide a similar service for the tooth of a child?

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Extra individual teeth ..... .50 each for molars; .35 each for all others

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The Interproximal Spot Filling

LAVETA LEHN
O'Neill, Nebraska

EDITOR'S NOTE

LaVeta Lehn is a dental assistant, but Ken Eatlick thought so well of this paper, submitted to him while Miss Lehn was doing work at the Ann Arbor school, that he sent it on to us for publication. We met Miss Lehn while she presented a table clinic at the A.D.A. meeting this last September, and were impressed by her evident ability and efficiency. We think her employer is a lucky fellow—and we're sure too, that you'll like this paper of hers on dentistry for children. We wouldn't be a bit surprised to hear some of us admit we place interproximal spot fillings in our patients, after reading Miss Lehn's able defense of the practice!!

A. E. S.

Why has children's dentistry played so little a part in the work of the general dental practitioner? Is it due to lack of interest or appreciation of the dental well-being of the youthful patient? Is it because the dental schools have been slow in adopting pedodontics as a part of the curriculum? Could it be that the common conception of the attitude of the child toward the dentist has been reversed, and the dentist is afraid of the child? I believe that the answer to the first question is contained in a combination of the last three.

Too many dentists are still heard to say, when the child enters the dental office for advice and service, "Leave the tooth alone if it doesn't ache. It is just a 'baby' tooth and will soon fall out anyway." Too little importance has been given to the function of the primary teeth. Aside from needing them to masticate food for proper digestion during the years when body growth is rapid, and the health of body tissues demands nutritional adequacy, these teeth have an important role in maintaining a pleasing facial contour and preventing dento-facial deformities in the child.

Dr. Morgan[1] states that in a survey of one hundred cases, it has been found that fifty-four percent of cases of malocclusion are caused by premature loss and prolonged retention of the primary teeth, which could have been prevented by correct operative procedures. The findings of Dr. Brandhorst[2] on the frequency of occurrence of various etiologic factors in dento-facial deformities, closely parallel Dr. Morgan's statement.

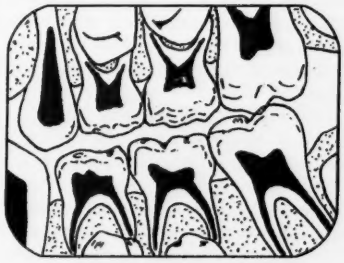
The fact that dental schools were slow in including pedodontics in the curriculum, cannot be overlooked as a contributing factor in the neglect of adequate dental care for children. [3]The American Society for the Promotion of Dentistry for Children was organized in 1927 "for the stimulation, by every available means, of the practice of more and better children's dentistry." One of the promotive aims of this new organization, was the incorporation of a course in children's dentistry, in the curriculum of every dental school in the United States and Canada. How well the society has succeeded in this one particular aim may be decided from the following statistics: In 1928, replies to a questionaire by 29 schools indicated that 7 of them were giving lectures of some sort on children's dentistry. In 1932, 38 replies indicated that 29 schools were lecturing on this subject. In 1935, 41 replies showed that 38 schools had arranged to give lectures on the subject. In 1936, 42 schools of the 43 that replied, were giving lectures of this nature in various departments. Of these 42, 31 were giving courses which were designated distinctly as children's dentistry and which ranged from 5 to 128 hours in extent. Seven schools in 1936, offered post graduate courses, and 3 offered graduate instruction in the subject."

The third factor, the fear which the dentist has of the child patient, is, I believe, an outgrowth of his feeling of an inadequate prep-

aration for treating the child patient, combined with his inability to meet the child as a social being. A thorough study of child psychology will lead to a better understanding of the child, and will go far toward relieving any feeling of being ill at ease socially.

In the last few years there has been an increasing interest in developing simplified techniques in dental operations for the young child. Comparative studies of the anatomy of the primary and permanent teeth are of basic importance in children's dentistry[1]. (1) The crowns of primary teeth are more bell-shaped and constricted at the base than those of permanent teeth, so that if the same cavity preparation is used on them as is used on permanent teeth, the result would be exposed pulps. (2) The enamel is thinner, more brittle, and chips easier than the enamel of permanent teeth, hence, it is important to not leave thin enamel walls unsupported by dentin. (3) The dentin is softer, more easily permeable than that of permanent teeth. Decay is more rapid and discoloration penetrates the dentin quickly. All decay must be removed in cavity preparation. (4) Primary pulp chambers are larger in proportion to the size of the tooth and are nearer the outer surface, with the possible exception of the occlusal surface of the primary molar. [4]Expect a pulp horn under each cusp or eminence and the mesial pulp horns of the mandibular molars extend high toward the marginal ridge. (5) [1]Roots are diverging and care must be taken in extraction to avoid injury to the developing permanent teeth, especially if the primary tooth is lost prematurely, or, if abnormal resorption is present, to avoid the possibility of leaving root fragments embedded in the jaw.

If the operator keeps in mind the average time of absorption and exfoliation of the primary teeth in relation to the normal calcification and eruption of the permanent teeth, it will be an aid to him in mapping out his course of procedure. The x-ray is a valuable aid in children's dentistry. Its use removes much of the guess work from operative procedures. For example, a primary tooth with no permanent successor might be treated very differently from one which would be exuviated in a few weeks or months.



Typical pulp chamber anatomy in a 7-year-old's primary molars.
4. Accepted Technics in Children's Dentistry.

[7]It is difficult to locate small interproximal cavities in primary teeth because of their broad contacts and, here again, the x-ray is helpful. Bite-wing radiograms serve a useful purpose as visual education material. Premature loss of primary teeth is due almost one restored to health and function. Early detection of these small cavities is essential to a program of adequate dental care for the young child.

[1]A few principles of operative procedure should be kept in mind at all times. The greater the speed of the engine, the greater is the amount of friction and heat, causing discomfort to the patient. This pain can be minimized by running the belt on the small pulley and keeping the speed uniform. Sharp instruments and a dry field of operation do their part in reducing pain. Jeserich[11], in his research, however, finds that there is less thermal gressed to the extent that the tooth cannot be hundred per cent to decay which has prochange when the bur is run in a wet field. The small head contra angle hand piece and short shank burs are more adaptable to the child mouth. [1]Too great a use of air in the cavity is painful, so a cotton pellet may be used to wipe away debris.

In preparing cavities in primary teeth, conservation of tooth structure must be an aim of the operator, and he must bear in mind the anatomic characteristics of the teeth, and their normal growth and development. Dr. Morgan[5] suggests that whenever possible, dental operations for children should be started on the

lower left side as the position of the dentist's arm around the patient's head affords better control of both the child and the instruments, an important factor until confidence is established.

[1]The areas in primary teeth most susceptible to decay are the distal surface of the first molars, the mesial of the second molars, occlusal pits of the upper second molars, occlusal fissures of the upper central and lateral incisors. After the eruption of the six-year molars, the distal of the second primary molars is added to the list. It is the problem of the dentist to restore these teeth until the normal shedding time.

The interproximal spot filling has had a place in dental literature for several years and a few operators have been using it over a period of time long enough to prove its worth. [6]In dealing with small approximal cavities, the operator must apply a course of treatment to fit the case and strive for mechanical perfection of the filling, insure the health of the pulp and consider the general health of the individual. No one material or method is suitable for all cases and part of the success or failure of a case depends upon the selection of the filling material which is most suitable. Since it has been demonstrated that the same patients who are susceptible to infection due to inadequately filled root canals are also susceptible to metastatic infection due to pulp changes under fillings, there has been a definite trend in operative dentistry toward conservation of tooth structure and greater pulpal protection. Nature builds secondary dentin to protect the pulp but if the patient is young and the cavity is small, the pulp has not had an opportunity to protect itself.

Often, when preparing a distal-occlusal cavity in the first primary molar, it will be found that there is also a small cavity in the mesial of the second molar, and if so, it may be filled thus: [7]Prepare the cavity in the first primary molar which permits access to the mesial cavity in the second molar. This may be prepared as a simple proximal cavity, using a small round bur in the straight hand piece to open the cavity and remove the decay. Make retention buccally and lingually with an inverted cone bur. Dr. Morgan recommends the use of copper amalgam as the best filling material for the mesial spot cavity, as it is away from the stress of mastication, and as the margins will not be in a self-cleansing area, the deposit of copper salts will prevent recurrence of decay. Place a temporary filling in the first molar until the next appointment when the spot filling should be polished. It is important to polish well the mesial spot filling as the first bicuspid will normally be in contact with it for a year or more. Ideally, it should be polished again when the first primary molar is exfoliated, and this is possible if the dentist instructs his young patients to return to the office for a check-up whenever they have shed a tooth. This simple routine is worth much to the patient.

At the second appointment, the cavity in the first molar can be filled with silver amalgam or a gold inlay. A silver amalgam filling is usually adequate, but if the child is very young and a minimum of preparation and a maximum of durability are important, the gold inlay is preferable.

Harris[8] emphasizes the use of a cement base as a pulp protection essential to primary teeth if the proximal area of the prepared cavity is more than twice the depth of the thin proximal wall.

[9]The mesial surface of the six year molar is another place where the approximal spot filling may be used to good advantage. As was mentioned earlier, cavities often develop in the distal of the second primary molar before it is time for it to be exfoliated and after the eruption of the first permanent molar. When that happens, it is not uncommon to find a small area of decalcified enamel in the mesial of the permanent molar. The process in this case is essentially the same as for the approximating cavities in the primary molars. First, prepare the distal-occlusal cavity in the primary molar which provides access to the mesial of the permanent molar and it can then be prepared as a simple cavity. (Figure I.) It should then be filled with silver amalgam (Figure II.) which may be changed, after the primary tooth is shed, to a gold foil. At the next sitting, the mesial spot filling can be polished and a silver filling placed in the distal-occlusal of the primary molar. (Figure

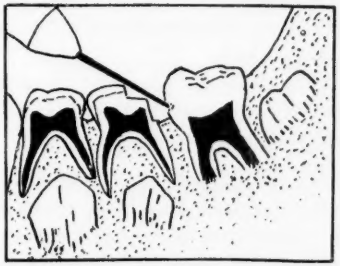


Figure I. Method of cavity preparation. (George E. Morgan, Care of the First Permanent Molar, J.A.D.A., January, 1936.)

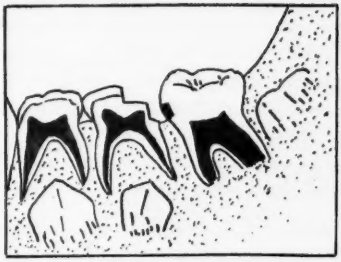


Figure II. Silver amalgam in mesial surface of first permanent molar.

III.) In case this tooth has no permanent successor, a gold inlay is advisable.

The period of time between the exfoliation of the second primary molar and the eruption of the second bicuspid proves an excellent opportunity to restore the mesial surface of the six-year molar with a permanent filling because of the ease of its accessibility. If the cavity is small and does not extend near to the occlusal surface, a gold foil spot is recommended. (Figure IV.) The filling and the entire mesial area should be well polished to provide a smooth contact surface for the second biscuspid. Such fillings as these will usually last many years and the tooth is spared extensive cutting, and the pulpal shock which is incident to extensive cavity preparation in young teeth, is avoided.

Irving[6] describes the use of the spot filling whose margins are defined by carious involvement, not only in cases where no tooth approximates the small cavity, but also in the teeth of children when calcification of dentin is incomplete and the carious process runs a rapid course after it has once penetrated the enamel. These small cavities can often be found after a prophylaxis or by means of the bite-wing radiogram and should be filled as early as possible.

For this type of proximal cavity, Irving produces separation of the teeth, either by means of a mechanical separator or with silk, grass line or wire ligature, solid rubber or rolled rubber dam or gutta percha. The cavity is opened by means of a very small round or tapered fissure bur, being careful not to mar the enamel on the approximating tooth. Caries is removed with a small round bur. The depth of the cavity should be determined as early as possible and if it is not possible to

Figure III. Cavities correctly filled. (George E. Morgan, Care of the First Permanent Molar, J.A.D.A., January, 1936.)

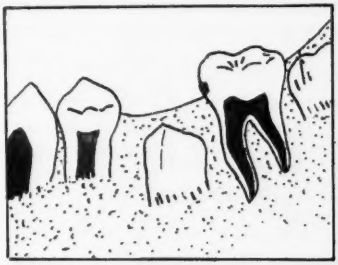


Figure IV. Period in dentition affording opportunity to place gold foil in mesial surface of first permanent molar.

reach all parts of the carious structure, the cavity should be extended through the marginal ridge to the occlusal surface. The margins are extended with burs, small chisels, and hatchets so as to include all decalcified enamel and in some cases, the contact point. Buccal and lingual retention is made with a small inverted cone or wheel bur.

Because of inaccessibility, it is extremely difficult to condense a gold foil filling except on the mesial surfaces of some bicuspids and first molars. The use of one of the newer amalgams is usually advisable. Silicate cements should never be used as fillings in cavities of this kind. The use of the rubber dam keeps the field of operation dry and aids in visibility.

Polish and approximating surfaces of the teeth with cuttlefish discs, which to a large extent precludes further decay. The amalgam is packed and condensed as thoroughly as possible with very small pluggers and the cavity is filled slightly to excess. The next day, the teeth are again separated and the filling polished with strips and discs.

Irving states that "Such fillings will frequently have to be replaced at a later time, and even though it may be in a year or two, I feel the operator is justified in their insertion. Such a filling should never be used without a careful explanation to the patient as to its selection, or, in the case of children, to the parent. Patients and parents of patients always prefer the minimum amount of tooth cutting and readily agree to such a program."

Unless the patient is extremely susceptible to caries, Irving recommends the use of the spot filling for small approximal cavities. However, if the case is extremely susceptible, he feels it is necessary to carry the margins into immune areas, involving the occlusal surface of the tooth.

Dr. McBride also recommends the Irving technique as a means of avoiding excessive cutting and pulp irritation.

In "Accepted Technics in Children's Dentistry," the proximal spot filling is indicated for small cavities on the mesial surfaces of teeth after the completion of the cavity preparation of distal-occlusal cavities anterior to them. The technic is like that of Morgan's previously described in this paper, except that ammoniacal silver nitrate solution is reduced with oil of cloves or eugenol over the entire mesial surface of the deciduous molar. Silver amalgam is the filling material advised.

Dr. L. A. Burgess,[12] O'Neill, Nebraska, has been using the proximal spot filling in his practice for a number of years with very good success. He permitted me to have access to his files, and from them I have gathered a number of cases where he has used this particular type of restoration. I selected cases from the records of patients who had had no dental work done elsewhere so that an accurate follow-up was possible. Although the number of cases recorded here is not large, they are representative and may be considered a fair sample as no sorting or choosing of cases was done.

To simplify the tabulations, numbers are used to indicate the tooth and position of the cavity; numbers 1 to 16 being the upper teeth from right third permanent molar to the left, and numbers 17 to 32 being the lower teeth from the left third permanent molar to the right. The raised 1 and 2 indicate the mesial and distal surfaces of the teeth, respectively.

	Patient	Cavity	Date	Treatment	Filling Material
1.	J. A.	18^1	May, 1932	$AgNo_3$	Amalgam
	Filling still in place and in good condition.				
2.	M. A.	19^2	June, 1933	None	Amalgam
	Cavity in occlusal involved distal area, filled, April, 1937.				
3.	M. B.	21^1	January, 1934	$AgNo_3$	Amalgam
	Decay rampant, replaced with mesial-occlusal filling, April, 1937.				
4.	M. B.	20^1	April, 1933	Phenol	Amalgam
	Filling still in place and in good condition.				
5.	H. B.	13^1	April, 1925	None	Amalgam
	Filling still in place and in good condition.				
6.	H. B.	6^2	March, 1929	(Separation)	Gold foil
	Filling still in place and in good condition.				
7.	H. B.	19^1	June, 1932	$AgNo_3$	Amalgam
	Filling still in place and in good condition.				
8.	M. B.	4^1	August, 1926	None	Amalgam
	Replaced with mesial-occlusal filling, December, 1941.				
9.	M. B.	29^2	June, 1926	None	Amalgam
	Replaced with gold inlay, 1939.				
10.	R. B.	3^1	September, 1932	None	Amalgam
	Filling still in place and in good condition.				
11.	M. C.	13^2	July, 1917	None	Amalgam
	Filling still in place and in good condition.				
12.	A. D.	14^1	June, 1926	None	Amalgam
	Filling still in place and in good condition.				
13.	A. D.	3^1	August, 1927	None	Amalgam
	Filling still in place and in good condition.				
14.	A. D.	19^2	June, 1926	None	Amalgam
	Replaced with distal occlusal filling, June, 1938.				
15.	J. D.	13^2	February, 1926	None	Amalgam
	Replaced with distal occlusal filling, March, 1931.				
16.	J. D.	4^2	February, 1926	None	Amalgam
	Tooth extracted, November, 1933. (Reason for extraction not recorded.)				
17.	J. H.	30^1	April, 1924	None	Amalgam
	Replaced with mesial-occlusal filling, September, 1930.				
18.	J. H.	19^1	August, 1930	$AgNo_3$ Eug.	Amalgam
	Extracted, April, 1936. (All teeth were extracted.)				
19.	D. H.	3^1	May, 1932	$AgNo_3$	Amalgam
	Filling still in place and in good condition.				

As may be noted from the cases cited, Dr. Burgess used the interproximal spot filling in the distal of teeth as well as in the mesial. In most cases, these were placed when a mesial-occlusal cavity was being prepared in the approximating tooth. Whether the cavity is in the mesial or the distal, Dr. Burgess emphasizes that in any case where access to a margin is not possible, the interproximal filling is not indicated. Care must be given to the toilet of the margins and especially where silver nitrate is used, making sure that none of the precipitate is left on the enamel walls of the cavity.

Due to the characteristics of the silver amalgam filling, Dr. Burgess cuts retention all the way around the cavity. For this purpose, he uses a small round bur, except on the portion toward the occlusal of the tooth and there he uses a wheel bur which is the only one that will cut retention there. As much or more care must be taken in the handling of the amalgam for this type of restoration as for any other, making certain the mix is not too sloppy or too dry. He recommends the use of mallet force to condense the filling where ever possible. At present, Dr. Burgess is using a Hollenbeck Pneumatic Plugger, but before he had that, he tapped the hand plugger with the handle of another instrument or small mallet,

as the case seemed to indicate. Dr. Burgess uses the interproximal spot filling only where he can positively see that all decay has been removed.

Summary

The cases chosen at random and recorded in this paper would indicate that the interproximal spot filling gives service over a period of time long enough to justify its use. It has the advantage, also, of being less expensive to the patient than a class II filling, and a minimum of cutting in cavity preparation decreases pulpal shock and conserves tooth structure.

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